SVERDLIK, B.D. (Karaganda, prosp. Stalina, d.5, kv.16)

Case of a hemorrhagic cyst in the mesentery proper in a 6-year old girl. Nov. khir. arkh. no.4:101-102 Jl-Ag '61. (MIRA 15:2)

1. Khirurgicheskoye otdeleniye Karagandinskoy gorodskoy bol'nitsy No.8.

(MESENTERY--TUMORS)

MENDELEYEV, I.S., inzh.; TROYETSKAYA, A.A., inzh.; SVERDLIK, L.V., inzh.

Practical method of calculating generator - engine systems with triple winding exciters for electric propulsion diagrams. Sudostroenie 26 no.6:28-32 Je '60. (MIRA 13:7)

(Ship propulsion, Electric)

MENDELEYEV, I.S., inzh.; VOLOKHOV, S.A., inzh.; SVERDLIK, L.V., inzh.

Power losses in the steel of d.c. machines with large inductance values. Vest. elektroprom. 34 no.4:48-51 Ap '63.

DOLGIN, I.; SVERDLIK, Sh.; BAKHSHEYEV, A.

Changes in the system of noncash payments. Den. i kred. 16 no.8: 25-31 Ag '58. (MIRA 11:9)

(Payment)

SVERDLIK, Sh.

Role of the bank rate in strengthening business accounting. Den. i kred. 19 no.4:17-24 Ap '61. (MIRA 14:3)
(Interest and usury)

SVERDLIK, Sh.

Surplus commodities. Den.i kred. 21 no.1:24-29 Ja '63.
(MIRA 16:2)

1. Nachal'nik otdela kreditovaniya promyshlennosti soveta narodnogo khozyaystva Novosibirskoy oblastnoy kontory Gosbanka.
(Novosibirsk Province--Machinery industry--Equipment and supplies)

SHTEYNSHLEYGER, S.; SVERDLIK, Sh.

Ways to increase bank control over inefficient enterprises. (MIRA 16:5)
Den. i kred. 21 no.5:13-20 My '63.
(Banks and banking) (Industrial management)

83370

S/051/60/009/003/009/011
E201/E691

26.1512

AUTHORS: Sëra, T. Ya. and Sverdlik, V.V.

TITLE: A New Band in the Absorption Spectrum of Polycrystalline Cadmium Sulphide Layers

PERIODICAL: Optika i spektroskopiya, 1960, Vol. 9, No. 3, pp. 407-409

TEXT: The authors studied the effect of heat treatment on the absorption spectra of polycrystalline cadmium sulphide layers. Non-luminescent bright-yellow cadmium sulphide powder was sublimated in vacuum onto glass plates. Layers produced in this way were about 10^{-6} cm thick so that interference did not affect absorption measurements. Absorption spectra were recorded in the 400-600 mμ region with a quartz photoelectric spectrophotometer SF-4. Before heat treatment the absorption spectrum had its usual form (Fig. 1a). After heating in air for 5 min at 300°C a new wide band appeared with a maximum at 485 mμ (Fig 1б). This band can be seen more clearly in Fig 1в which represents subtraction of the curve a from the curve б in Fig. 1. The same band could be produced by heating in vacuo, i.e. it was not due to interaction with atmospheric oxygen. Additional experiments

Card 1/2

83370
S/051/60/009/003/009/011
E201/E691

A New Band in the Absorption Spectrum of Polycrystalline Cadmium Sulphide Layers

showed (Fig. 2) that the new band was not produced by structural changes during heat treatment. It was concluded that a new band originated as follows. Heating caused local cracks which could be seen with a microscope. Metal atoms collected in these cracks producing centres responsible for the additional absorption in the 430-540 mμ region with a maximum at 485 mμ. The new absorption band was accompanied by a sharp rise of the electrical resistance. There are 2 figures and 8 references: 7 Soviet and 1 English.

SUBMITTED: August 11, 1959

Card 2/2

SVERDLIN, A.L.

Pneumatic remote control system of marine internal combustion engine. Sudostroenie 30 no.9:37-40 S '64.
(MIRA 17:11)

SVERDLIN A. S. [redacted]

~~SVERDLIN, A. S.~~

GODNEV, I. N. and SVERDLIN, A. S. CA: 28-3976/6
Khimstroi 6, 8-14 (1934)
Heat capacities of gases at high pressures.

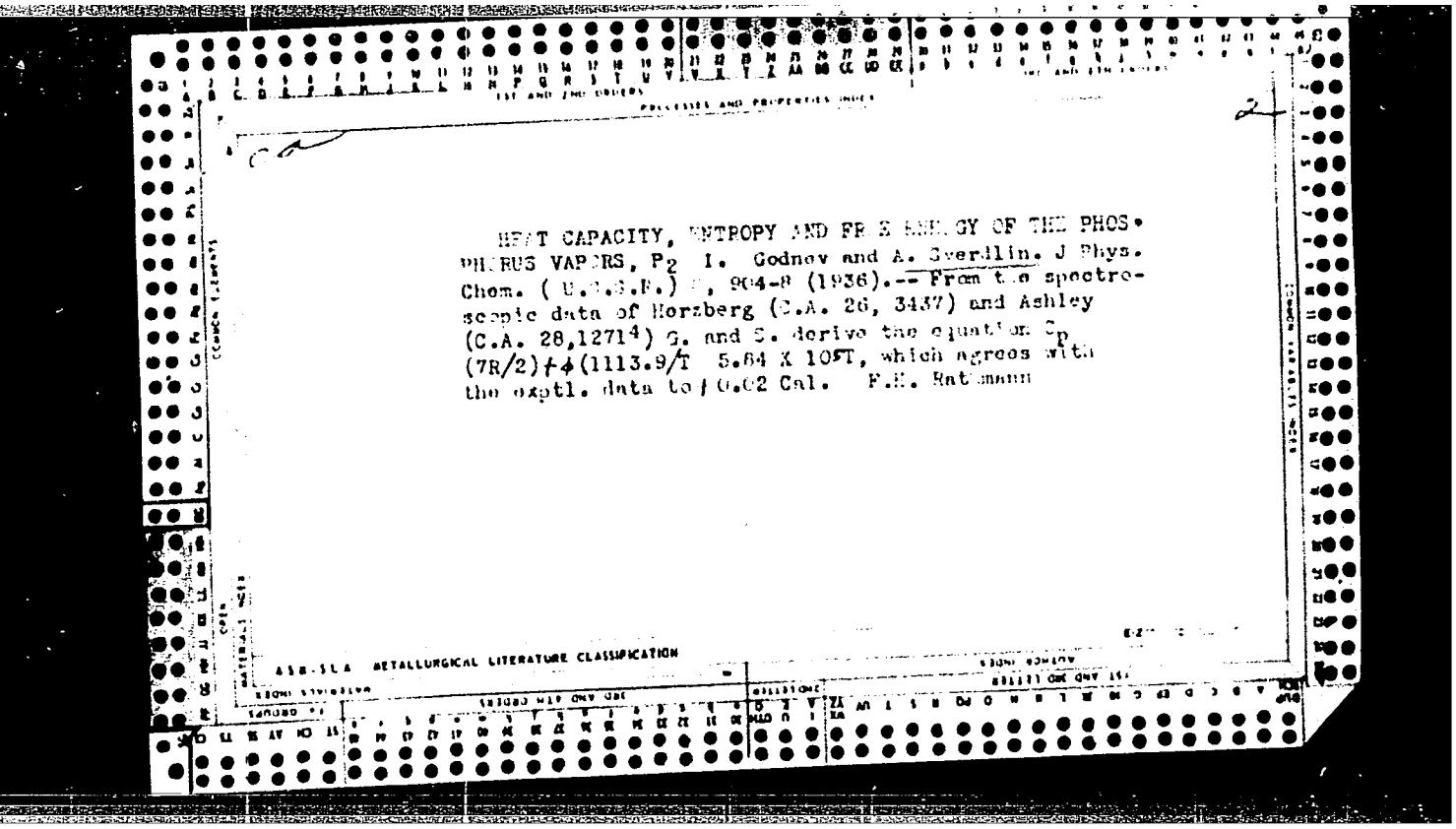
[redacted]

RESTRICTED

SVERDLIN, A.

GODNEV, I. N. and SVERDLIN, A. CA: 30-371/9
Z. Physik 97, 124-30 (1935)
Specific heat, entropy and free energy of sulfur (S_2) vapor at temperatures between 100° and 5000° K.

RESTRICTED



HEAT CAPACITY, ENTROPY AND FREE ENERGY OF THE PHOSPHORUS VAPORS, P_2 I. Godnev and A. Sverdlin. J Phys. Chem. (U.S.S.R.) , 904-8 (1936).-- From the spectroscopic data of Herzberg (C.A. 26, 3437) and Ashley (C.A. 28,12714) G. and S. derive the equation C_p $(7R/2)+4(1113.9/T$ 5.64 X 10^5T, which agrees with the exptl. data to $\pm$ 0.02 Cal. F.H. Rathmann

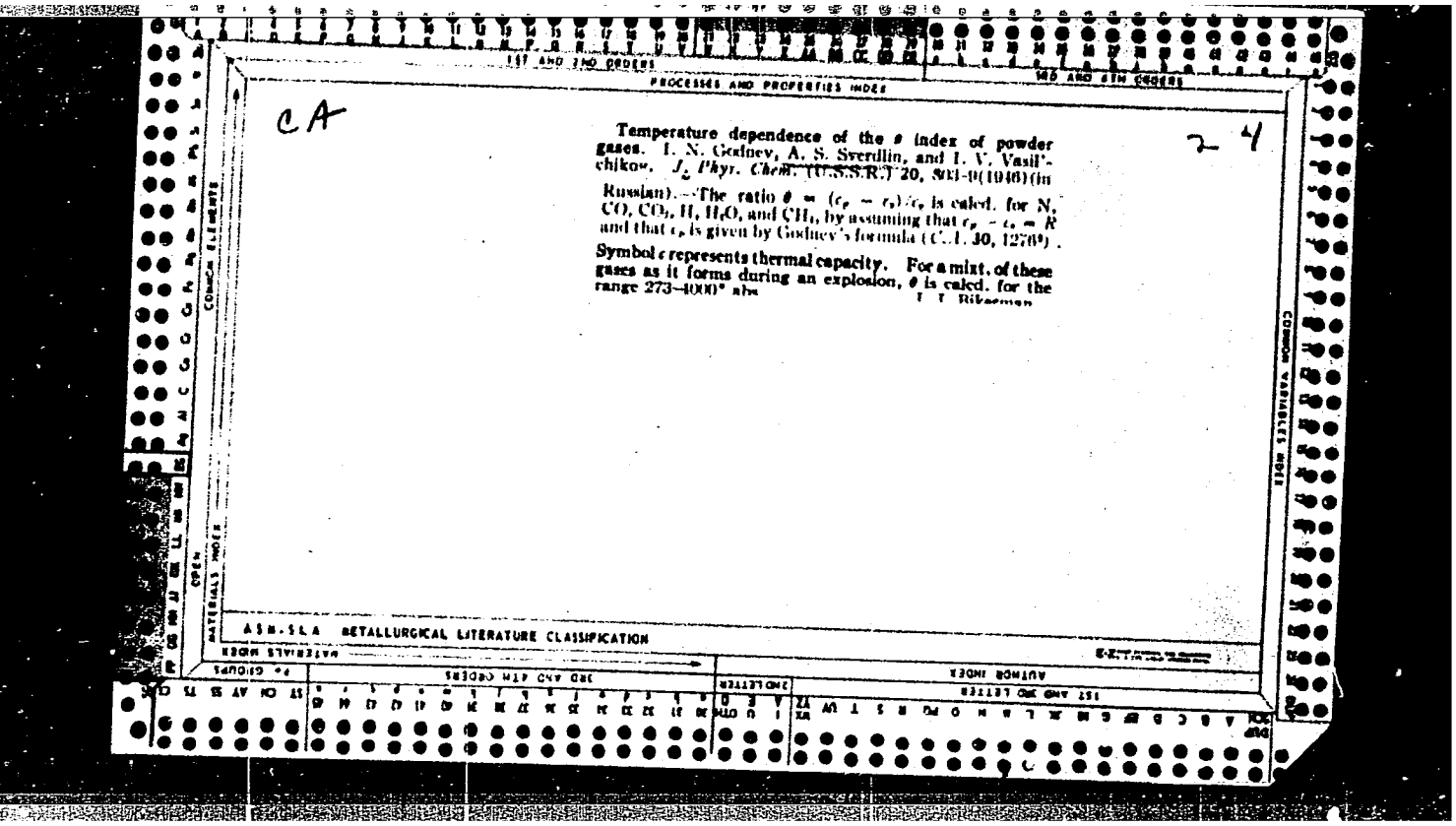
A58-SLA METALLURGICAL LITERATURE CLASSIFICATION

GODNEV, I.; PAYUKHINA, A.; SVETDLIN, A.

Chemico-Technological Institute, Ivanovo. (-1940-).

"The Thermodynamic Functions of Acetone."

Zhur. Fiz. Khim., Vol. 14, No. 3, 1940.



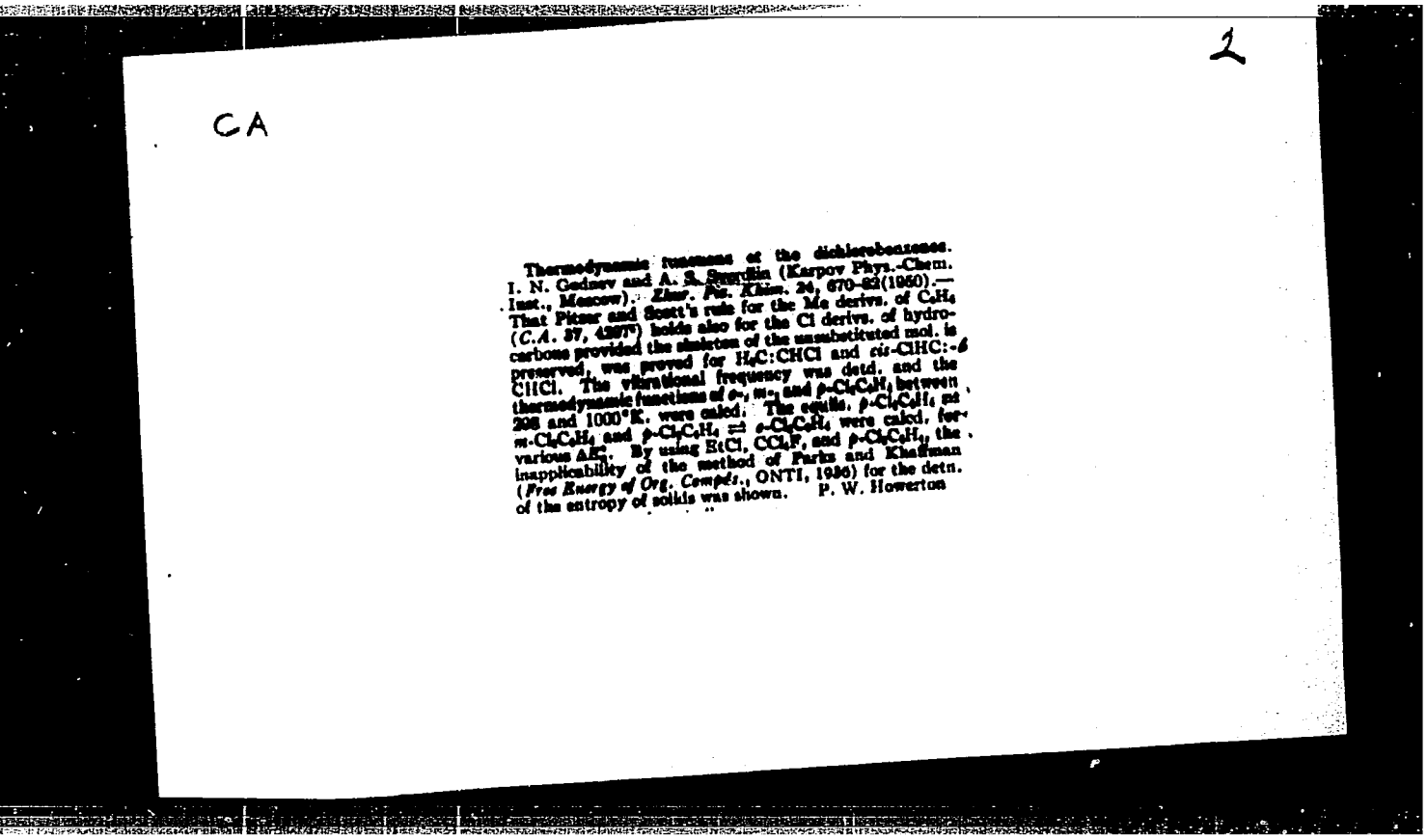
CA

2 4

Temperature dependence of the θ index of powder gases. I. N. Godnev, A. S. Sverdlin, and I. V. Vasil'chikov. *J. Phys. Chem.* (U.S.S.R.) 20, 983-9(1946)(in Russian).—The ratio $\theta = (c_p - c_v)/c_v$ is calcd. for N, CO, CO_2, H, H_2O, and CH_4, by assuming that $c_p - c_v = R$ and that c_v is given by Godnev's formula (C.A. 30, 1276⁹). Symbol c represents thermal capacity. For a mixt. of these gases as it forms during an explosion, θ is calcd. for the range 273–4000° abs.

I. T. Ribesman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



2

CA

Thermodynamic functions of the dichlorobenzenes. I. N. Godnev and A. S. Smirdin (Karpov Phys.-Chem. Inst., Moscow). *Zhur. Fiz. Khim.* 34, 670–82(1960).—That Pitzer and Scott's rule for the Me derivs. of C_6H_6 (*C.A.* 37, 4287^T) holds also for the Cl derivs. of hydrocarbons provided the skeleton of the unsubstituted mol. is preserved, was proved for $H_2C{:}CHCl$ and *cis*-ClHC:CHCl. The vibrational frequency was detd. and the thermodynamic functions of *o*-, *m*-, and *p*-$Cl_2C_6H_4$ between 298 and 1000°K. were calcd. The equils. *p*-$Cl_2C_6H_4$ ⇄ *m*-$Cl_2C_6H_4$ and *p*-$Cl_2C_6H_4$ ⇄ *o*-$Cl_2C_6H_4$ were calcd. for various ΔF_T°. By using EtCl, CCl_2F_2, and *p*-$Cl_2C_6H_4$, the inapplicability of the method of Parks and Khaffman (*Free Energy of Org. Compds.*, ONTI, 1936) for the detn. of the entropy of solids was shown. P. W. Howerton

CA

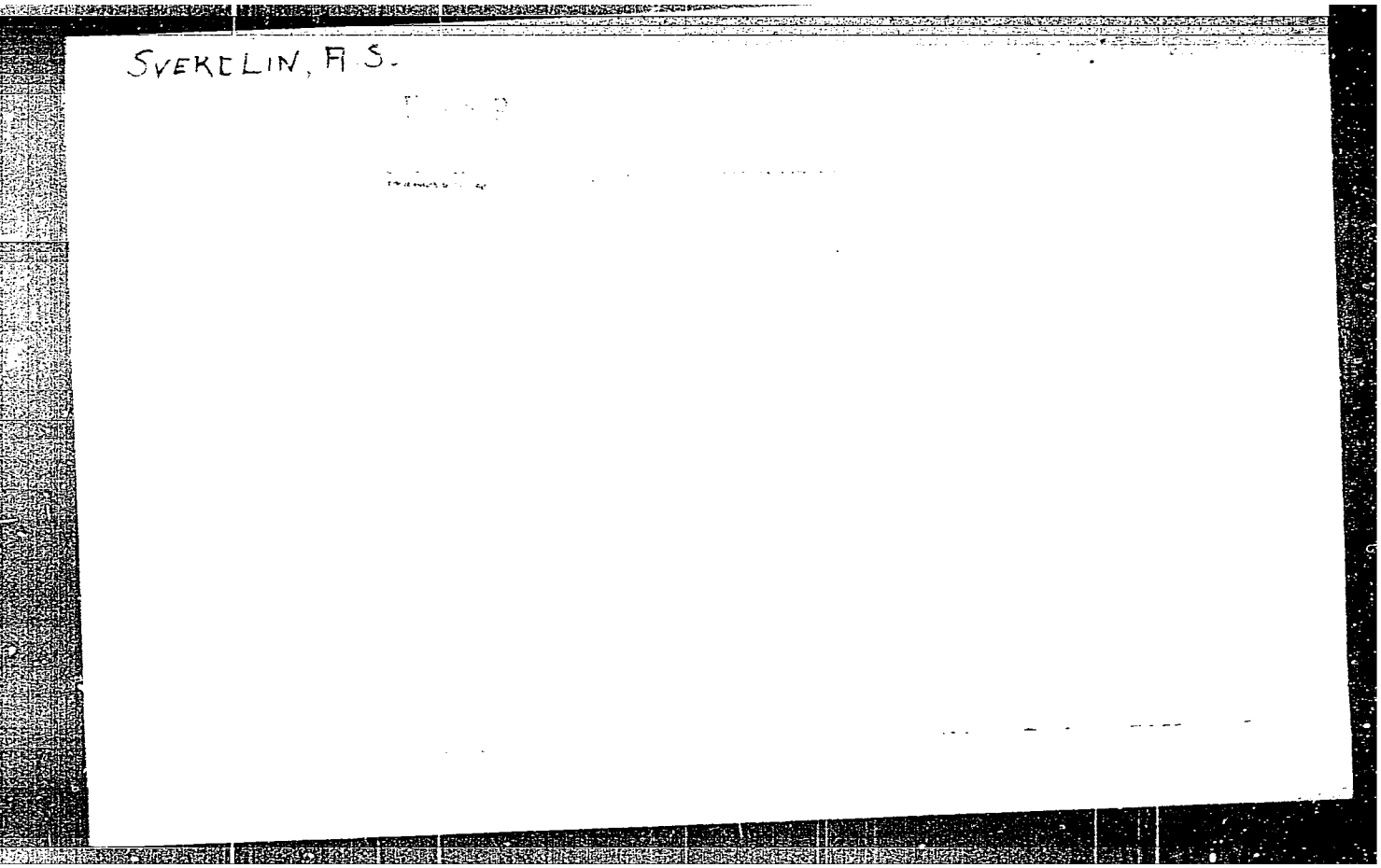
Thermodynamic functions of chlorobenzene. I. N. Godnev, A. S. Sverdlin, and M. S. Savogina (Chem.-Tech. Inst., Ivanovo). *Zhur. Fiz. Khim.* 24, 807–12(1950); cf. *C.A.* 44, 10478*b*.—With the use of Pitzer and Scott's product rule, the data of Sponer and Kirby-Smith (*C.A.* 35, 7287⁹) and of Kohlrausch, *et al.* (*C.A.* 36, 6083⁵; 41, 6153*d*) and symmetry considerations, the normal vibration frequencies of chlorobenzene are detd. and tabulated. The thermodynamic functions (gas, 1 atm. as standard state) are calcd. at 298.2, 300 to 1000°K. at 100° intervals. The results are: $-(F^\circ - H_0^\circ)/T$ = 61.24, 61.32, 65.70, 69.86, 73.84, 77.62, 81.26, 84.80, 88.11; $(H^\circ - H_0^\circ)/T$ = 13.62, 13.69, 16.98, 20.20, 23.32, 26.09, 28.56, 30.86, 32.86; S° = 74.86, 75.01, 82.68, 90.11, 97.16, 103.71, 109.84, 115.66, 120.97; C_p° = 23.30, 23.34, 30.30, 36.14, 40.80, 44.54, 47.57, 50.12, 52.21. A discrepancy between calcd. values and the exptl. data of Stull (*C.A.* 32, 1141⁹) is attributed to the use by the latter of the method of Parks and Huffman which has been shown to be unreliable (*C.A.* 44, 10478*b*). The free energy of formation corresponding to: $^1/_2Cl_{2(g)} + 2.5H_{2(g)} + 6C_{(graphite)} \rightarrow C_6H_5Cl_{(l)}$ at 298° is ΔF_{298} = 37,416 cal./mol. This value, however, is not precise, since it rests upon an approx. value of Thomsen (*Z. physik. Chem.* 52, 343(1905)) for the heat of combustion. M. B.

MOROZOV, V. I., VASIL'CHIKOV, I. V.
SVERDLIN, A. S., GODNEV, I. N.

Formaldehyde

Force constants and action coefficients of the formaldehyde molecule. Zhur.fiz.khim., 16, No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified.



SVERDLIN, A. S.

USSR/Chemistry

Card 1/1

Author : Sverdlin, A. S.

Title : Thermodynamic functions of halogen derivatives of methane. Part 2. - Thermodynamic functions of chloro- and iodine derivatives of methane

Periodical : Zhur. Fiz. Khim., 28, Ed. 5, 780 - 784, May 1954

Abstract : The calculations of the thermodynamic functions of chlor and iod-derivatives of methane were carried out with the aid of formulas adopted for the case of quasi-solid molecules and fundamental constants. The molecular data and the oscillation frequencies computed by P. G. Maslov and B. I. Stepanov served as bases for the compilation of thermodynamic function tables for above mentioned methane derivatives at a temperature range of 298.2 - 1000° K. Seventeen references: 7-USSR, 9-USA, 1-German. Tables

Institution : Chemical-Technological Institute, Ivanovo

Submitted : June 22, 1953

SVERDLIN, A.S.

USSR/ Physics

Card 1/1 Pub. 147 - 8/21

Authors : Sverdlin, A. S., and Godnev, I. N.

Title : Application of zero approximations and partial frequencies for an approximate solution of the molecular oscillation problem

Periodical : Zhur. fiz. khim. 29/10, 1807-1814, Oct 1955

Abstract : The problem of applying partial frequencies and diagonal zero approximations for the calculation of oscillation frequencies in a molecule was discussed. It was found that nine simple equations of motion correspond to diagonal zero approximations two of which can be interpreted as partial frequencies. Two other partial frequencies B'_i and M'_i were in total disagreement with the diagonal zero approximations. A certain natural zero approximation, introduced by M. A. Elyashevich and B. I. Stepanov, was found to be the most suitable of all the other zero approximations and partial frequencies. Twelve references: 10 USSR and 2 USA (1940-1953). Tables.

Institution : Ivanovo Chemicotechnological Inst.

Submitted : January 10, 1955

SVERDLIN, A. S.

SVERDLIN, A. S. : "Mul-approximations and the partial frequencies of a problem of oscillations in a molecule and their application to the calculation of thermodynamic functions of halogen derivatives of methane." Min Education RSFSR. Leningrad State Pedagogical Inst imeni A. I. Gertsen. Leningrad, 1956. (Dissertation for the Degree of Candidate in Physicomathematical Science)

Source: Knizhnaya letopis' No. 28 1956 Moscow

Sverdlin, A.S.

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions. B- 8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26082

Author : I.N. Godnev, A.S. Sverdlin
Title : Equilibrium of Dichlorobenzene Isomers.

Orig Pub : Zh. fiz., khimii, 1956, 30, No 5, 1185.

Abstract : The equilibrium constants and the composition of the equilibrium mixtures at 298, 16, 600 and 800°K were computed for the reactions n-$C_6H_4Cl_2$ (gas) $\rightleftharpoons$ m-$C_6H_4Cl_2$ (gas) and n-$C_6H_4Cl_2$ (gas) $\rightleftharpoons$ o-$C_6H_4Cl_2$ (gas) on the basis of bibliographic data (Godnev, I. N., Sverdlin, A.S., Zh. fiz. khimii, 1950, 24, 670; RZhKhim, 1955, 9177).

Card : 1/1

SVERDLIN, A. S.

51-6-4/26

AUTHORS: Godnev, I. N., Sverdlin, A. S. and Ushanova, N. I.

TITLE: Calculation of the Normal Vibration Frequencies and of Thermodynamic Functions of Germanium Tetraiodide. (Vychisleniye chastot normal'nykh kolebaniy i termodinamicheskikh funktsiy chetyrekhiodistogo germaniya.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.II, Nr.6, pp. 704-709. (USSR)

ABSTRACT: This paper reports approximate calculation of the normal vibration frequencies for germanium tetraiodide (GeI_4). These frequencies were calculated by extrapolation of the coefficients of induction (vliyaniya) of the molecules GeF_4, $GeCl_4$ and $GeBr_4$. From the dependence of the reduced induction coefficients for the above three molecules on the equilibrium bond lengths the coefficients of induction for GeI_4 were calculated. The results are given in Table 2. The mean values of the normal frequencies of GeI_4 were found to be: 171, 60, 276 and 87 cm^{-1}. This method

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Calculation of the Normal Vibration Frequencies and of Thermodynamic Functions of Germanium Tetraiodide.

was checked by applying it to the molecule of SiI_4. This was done by extrapolation of the inductions coefficients for SiF_4, $SiCl_4$ and $SiBr_4$. The calculated results for SiI_4 are given in Table 4. Comparison of the calculated values for the normal frequencies of SiI_4 with those obtained experimentally (Refs.15, 21) shows that the error does not exceed 20 cm^{-1} for the two higher frequencies of 168 and 405 cm^{-1}. For the SiI_4 frequencies of 63 and 94 cm^{-1} the error was only 10 cm^{-1}. The present authors conclude that the results of Jolly and Latimer (Ref.1) are incorrect. The latter two authors used Hildebrand's method (Ref.2) and obtained results which are considerably too low. Thermodynamic functions for GeI_4 are given in Table 6. They were calculated assuming harmonic vibrations and a rigid rotator model. There is 1 figure, 6 tables and 24 references, 9 of which are Slavic.

Card 2/3

SOV/51-5-6-12/19

AUTHOR: Sverdlin, A.S.

TITLE: Approximate Relationships Between Frequencies of Isotopic Molecules of the XY_4 Type (Priblizhennyye sootnosheniya mezhdu chastotami izotopicheskikh molekul vida XY_4)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 6, pp 702-704 (USSR)

ABSTRACT: The present note deals with simple formulae for calculation of F_2-symmetry frequencies of isotopic modifications of tetrahedral molecules. The formulae obtained satisfy the product rule of Teller and Redlich (Refs 6, 7). They are more convenient than the latter rule since they make it possible to calculate separately frequencies of isotopic molecules. The formulae were checked by calculation of the frequencies ν_3' and ν_4' of CD_4, SiD_4 and GeD_4 molecules. Table 1 gives the calculated values and those obtained by Tatevskiy (Ref 1). Both Tatevskiy and the present author used the data of Ref 8. Table 1 shows that the formulae established by the present author (see cols. 5, 9 and 12) and those of Tatevskiy (see cols. 4, 8 and 11) yield equally good approximations. Since the assignment of the ν_2 and ν_4 frequencies of GeH_4 was found to be incorrect (see Ref 10, 11) the author calculated the ν_3' and ν_4' of

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GeD_4 using new experimental data of Ref 11. The results of calculation are given in col. 4 of Table 2; they agree well with the experimental values listed in col. 3. There are 2 tables and 11 references, 5 of which are Soviet, 2 American, 2 German and 2 translations.

SUBMITTED: May 4, 1958

Card 2/2

AUTHOR: Sverdlin, A. S. 76-32-3-25/43

TITLE: Thermodynamic Functions of the Halogen Derivatives of Methane (Termodinamicheskiye funktsii galoidoproizvodnykh metana). III. Formulae for Approximate Calculations of the Coefficients of the Molecular Influence of Type XY_4 and Thermodynamic Functions of CJ_4 and CHJ_3 (III. Formuly dlya priblizhennogo vychisleniya koeffitsiyentov vliyaniya molekul vida XY_4 i termodinamicheskiye funktsii CJ_4 i CHJ_3)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol 32, Nr 3, pp 659-665 (USSR)

ABSTRACT: The present paper is connected with a preceding one. It makes possible a more exact coefficients of influence CJ_4 and/or frequencies of CHJ_3 as well as a precise determination of the calculated thermodynamic functions of these compounds. It was noticed that the zero approximation according to M. A. Yel'yashevich and B. I. Stepanova in the case of the two-dimensional block with the consideration of the condition $D_{12} \approx \emptyset$, can be represented as a combination of the partial frequencies, from which simple equations for approximate calculations of the influence coefficients of the

Card 1/3

Thermodynamic Functions of the Halogen Derivatives of Methane. III. Formulae for Approximate Calculations of the Coefficients of the Molecular Influence of Type XY_4 and Thermodynamic Functions of CJ_4 and CHJ_3

76-32-3-25/43

molecule XY_4 can be derived without knowing the spectrum of isotopic modifications. The results for CF_4, CCl_4 and CBr_4 calculated according to the derived formulae are compared in tables with those according to the method by B. I. Stepanova (ref. 7). It is then stated that the values for CJ_4, which were calculated in the preceding paper by P. G. Maslov (ref. 8), were not in agreement with the obtained results, and were thus newly calculated corresponding to the obtained results. In the investigations of the dependence of the influence coefficients on the equilibrium bond lengths in the transition $CF_4 \rightarrow CCl_4 \rightarrow CBr_4$, which were performed graphically, the frequencies for CJ_4 were calculated on the basis of the obtained data and formulae. The obtained results are compared with those calculated according to P. G. Maslov (ref. 8), and calculations of $SiBr_4$ vibration frequencies were performed for the verification of the method employed. The method of combined partial frequencies is also employed for correction calculations of the thermodynamic functions of CHJ_3. The results are approximately in

Card 2/3

Thermodynamic Functions of the Halogen Derivatives of Methane. III. Formulae for Approximate Calculations of the Coefficients of the Molecular Influence of Type XY_4 and Thermodynamic Functions of CJ_4 and CHJ_3

76-32-3-25/43

agreement with the data of Plyler and Benedict (ref. 18). A table of the thermodynamic functions of CJ_4 and CHJ_3 at 298.2-1000°K is given.
There are 2 figures, 6 tables, and 20 references, 12 of which are Soviet.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Chemical and Technological Institute, Ivanovo)

SUBMITTED: November 9, 1956

Card 3/3

GODNEV, I.N.; SVERDLIN, A.S.

Equilibrium of dichlorobenzene isomers. Zhur. fiz. khim. 35 no.2:474-475 F '61. (MIRA 16:7)

1. Ivanoskiy khimiko-tekhnologicheskiy institut.
(Benzene) (Phase rule and equilibrium)

S/076/62/036/012/001/014
B101/B180

AUTHORS: Godnev, I. N., Aleksandrovskaya, A. M., and Sverdlin, A. S.
(Ivanovo)

TITLE: Correspondence between the force constants of XY_4 and XY molecules, where X is a IVB subgroup element and Y a halogen

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 12, 1962, 2609 - 2615

TEXT: The coefficients k_q of XY_4 molecules are compared with the force constants k_e of XY molecules for halogen (Y) compunds of elements (X) of the IVB subgroup. Approximate equations are derived for calculating the dynamic coefficients of XY_4 molecules by M. Larnaudie's method (J. Phys. et radium, 15, 365, 1954): $k_1 = k_q + 3h = \nu_1^2/\varepsilon_y$; $k_2 = k_\alpha - 2l - 0 = \nu_2^2/3\varepsilon^2$; $k_{11} = k_q - h \approx \nu_3^2/A_{11} + A_{12}^2\nu_4^2/A_{11}|A|$; $k_{12} = \sqrt{2}(a - b) \approx -A_{12}\nu_4^2/|A|$; $k_{22} = k_\alpha - 0 \approx A_{11}\nu_4^2/|A|$ (1), where k_1 and k_2 are the reduced dynamic coefficients of the one-dimensional blocks, k_{11}, k_{12}, and k_{22} are the

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reduced coefficients of the two-dimensional block A_{11}, A_{12}, and A_{22} are the kinematic coefficients of the two-dimensional block. For the other symbols see M. V. Vol'kenshteyn, M. A. Yel'yashevich, B. I. Stepanov, Kolebaniya molekul (Vibrations of molecules); v. I., Gostekhteoretizdat, M., 1949. System (1) produced values for the force constants of CCl_4, CBr_4, SiF_4, $GeCl_4$, $GeBr_4$, and CF_4 which were consistent with published figures. The relation $k_q \approx k_e + 0.4$ was obtained for chlorides, bromides, and iodides by comparing the k_q coefficients of halogen compounds of C, Si, Ge, Sn, and Pb with the k_e coefficients of diatomic molecules obtained by Y. P. Varshni (J. Chem. Phys., 28, 1081, 1958). Comparison of r_e the interatomic distances for diatomic molecules with r_q for XY_4 molecules yields $r_e > r_q$ for iodides and $r_e < r_q$ for fluorides up to GeF_4. The course of r_e and r_q as a function of Z_y at constant X (Fig. 3) can be used for determining r_q of PbF_4, $PbBr_4$, and SnF_4. There are 1 figure and 3 tables. The most important English-language references are: Y. Morino, Y. Nakamura a. T.

Correspondence between ...

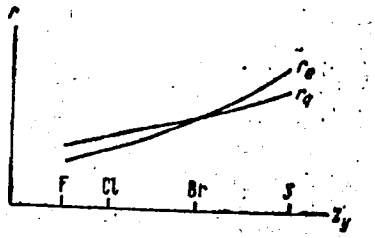
S/076/62/036/012/001/014
B101/B180

Jijima, J. Chem. Phys., 32, 643, 1960; C. W. F. T. Pistorius, J. Chem. Phys., 28, 514, 1958.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Institute of Chemical Technology)

SUBMITTED: March 4, 1961

Fig. 3. r_e and r_q as functions of Z_y.



Card 3/3

L 11059-63 EWP(q)/EWT(m)/BDS—AFFTC/ASD—JD

ACCESSION NR: AP3000480 S/0153/63/006/001/0165/0166

35

AUTHOR: Aleksandrovskaya, A. M.; Godnev, I. N.; Sverdlin, A. S.

TITLE: Thermodynamic functions of hafnium halides

SOURCE: Izv. VUZ: Khimiya i khim. tekhnologiya, v. 6, no. 1, 1963, 165-166

TOPIC TAGS: thermodynamic functions, enthalpy function, free energy function, entropy, specific heat, Hf chloride, Hf bromide, Hf iodide

ABSTRACT: As a supplement to their previous tabulation of the thermodynamic functions of iodides of fourth group elements, authors present a tabulation of the thermodynamic functions of hafnium iodide, hafnium chloride, and hafnium bromide. These were calculated from vibrational frequencies found by the method of A. M. Aleksandrovskaya and I. N. Godnev (Optika i spektroskopiya, 9, 273, 1960), using the interatomic separations found in the same article. Experimental (calorimetric) and calculated entropy values for Hf chloride at 485 and 496K agree to within 0.5%. Orig. art. has: 3 tables.

ASSOCIATION: Kafedra fiziki, Ivanovskiy khimiko-tekhnologicheskiy institut (Department of Physics, Ivanovskiy Chemical Technological Institute)

Card 1/2

L 36180-66 EWT(m)/EWP(t)/ETI IJP(c) ES/JD/WW/JW/JG

ACC NR: AP6014261 SOURCE CODE: UR/0153/66/009/001/0040/0043

AUTHOR: Godnev, I. N.; Sverdlin, A. S.

ORG: Physics Department, Ivanovo Chemical Engineering Institute (Kafedra fiziki, Ivanovskiy khimiko-tekhnologicheskiy institut)

TITLE: Heats of formation of gaseous uranium fluorides

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 1, 1966, 40-43

TOPIC TAGS: heat of formation, uranium compound, fluoride, heat of sublimation

ABSTRACT: The heats of formation of gaseous UF_5, UF_4, UF_3, UF_2, and UF were calculated. In the case of UF_4, the calculation involved the use of the heat of formation of the crystalline substance and of its heat of sublimation, and the value obtained was $\Delta H^0_{298} = -366$ kcal/mole. In the case of the remaining four fluorides, two methods were employed. In the first method, a curve of the heats of formation of gaseous fluorides UF_n from F (gas) and U (gas) were plotted as functions of n, and the results were recalculated for the standard state. The second method involved plotting the curve of the heats of detachment of a fluorine atom from UF_n (i. e., the curve of the heats of reaction at 298°K), according to the reaction

$$UF_n \text{ (gas)} \rightarrow UF_{n-1} \text{ (gas)} + F \text{ (gas)} + \Delta H_n,$$

as functions of n. The average heats of formation ΔH^0_{298} obtained by these two meth-

UDC: 541.11+536.66

Card 1/2

L 40956-66 EWT(m)/EWP(k)/T/EWP(v)/EWP(t)/ETI IJP(c) JH/JD HM/HM

ACC NR: AT6024927 SOURCE CODE: UR/2981/66/000/004/0175/0186

52

AUTHOR: Pospelov, K. S.; Chernyak, A. Ya.; Sverdlin, A. V.

48

ORG: none

27 B+1

TITLE: Mechanical properties of V92Ts high-strength aluminum alloy semi-products and welds 16 16

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 175-186

TOPIC TAGS: aluminum alloy, zirconium containing alloy, metal property, metal weld, metal welding, weld property /V92Ts aluminum alloy 44 18

ABSTRACT: The mechanical properties of V92Ts-alloy extruded shapes, forgings, and welds were tested. All articles tested were made under production conditions, solution annealed at 450C for 6 hr, water-quenched, and aged either naturally or artificially. It was found that artificial aging at 100C for 96 hr produced the highest strength (tensile strength, 47.8—53.1 kg/mm^2; yield strength, 34.8—45.6 kg/mm^2; at elongation, 10.8—17.6%). Articles artificially aged at 60C for 24 hr and then at 200C for 2 hr had the lowest strength (tensile strength, 38.5—43.7 kg/mm^2; yield strength, 23.8—30.9 kg/mm^2; at elongation, 11.4—16.4%). The optimum welding conditions were determined as follows: welding current, 140—160 amp (alternating current); tungsten electrode diameter, 3 mm; filler

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ACC NR: AT6024927

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wire diameter, 3—3.5 mm. Joints welded with V92 sv wire had a tensile strength of 32.7—34.8 kg/mm^2, a yield strength of 32.7—34.2 kg/mm^2, and an elongation of 10.7—14.7%. The joints welded with AMg6 and AMg4R wires (the latter containing zirconium and chromium) had a low tensile strength of 27.1—31.2 kg/mm^2, a yield of 26.6—30.6 kg/mm^2, but a high elongation of 20.0—24.7%. Orig. art. has: 2 figures and 7 tables.

[TD]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 5052

Card 2/2

SOV/110-59-1-17/28

AUTHORS: Mendeleyev I.S., Troyetskaya A.A. and Sverdlin, L.V. (Engineers)

TITLE: A Practical Method of Designing Three-Winding Direct-Current Generators (Prakticheskiy metod rascheta trekhobmotochnykh generatorov postoyannogo toka)

PERIODICAL: Vestnik Elektropromyshlennosti,1959,Nr 1,pp 60-62 (USSR)

ABSTRACT: Direct-current generators with the special characteristics required for certain industrial drives may have two or three fiel d windings. This article describes practical methods of designing generators with three field windings. The external characteristics of a generator are usually determined by the mechanical characteristic of the prime mover and are expressed by three points: (1) the no-load voltage and armature current when the prime mover is running light; (2) the normal rated current and voltage; (3) the voltage and current at which the prime mover stalls. The generator design commences with determination of the output and selection of the type of machine. It is shown that the output for which the machine may be designed depends on the shape of the external characteristics, as shown in

Card 1/2

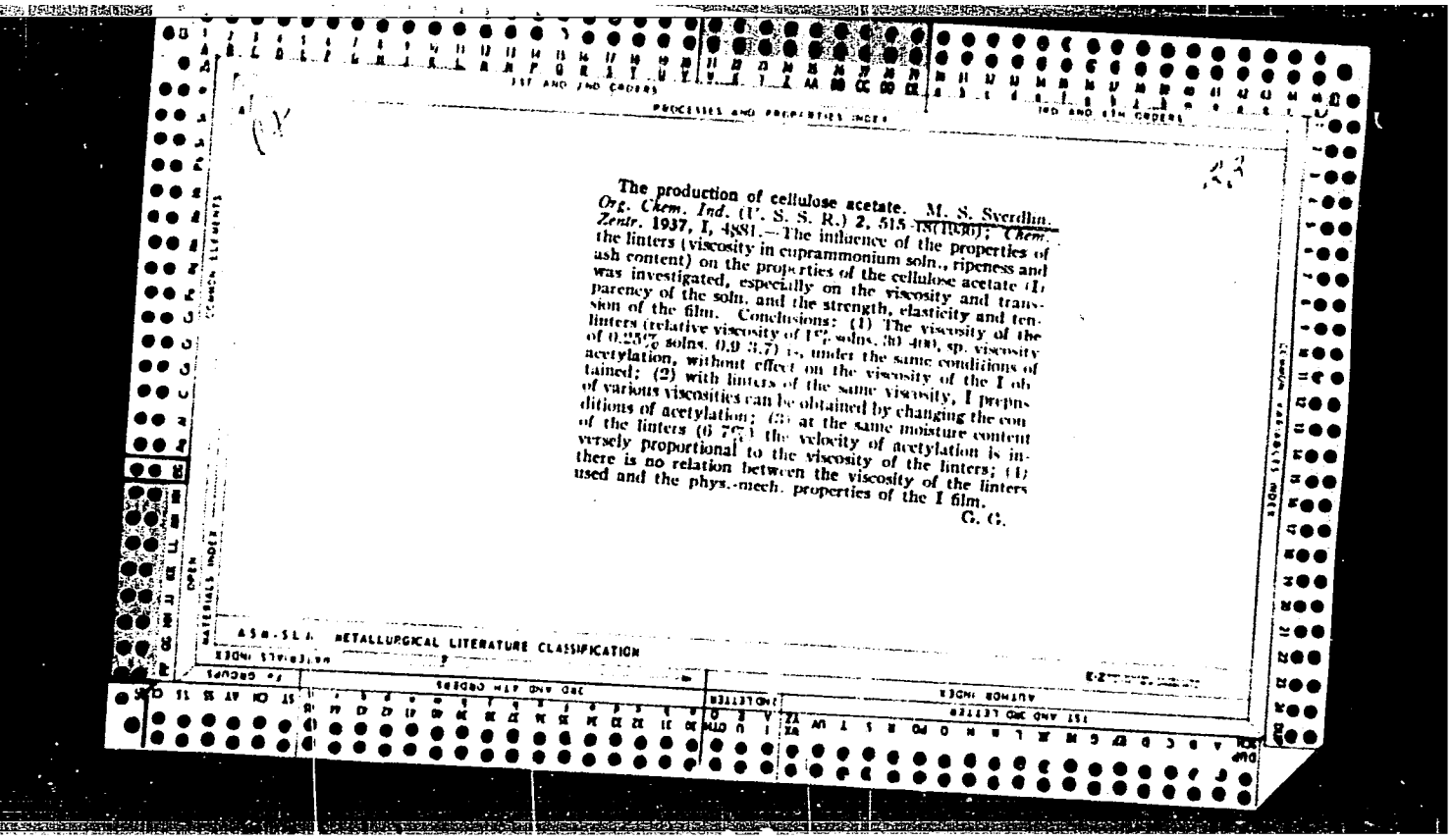
A Practical Method of Designing Three-Winding Direct-Current Generators

Fig 1. In driving excavators and other equipment a good deal also depends upon the operating conditions and duty cycle. The method of constructing the external characteristics of a three-winding generator from the no-load curve is then explained with reference to Fig 2. A formula is given for the design of the field winding. A numerical example of generator design is then worked out.

Card 2/2

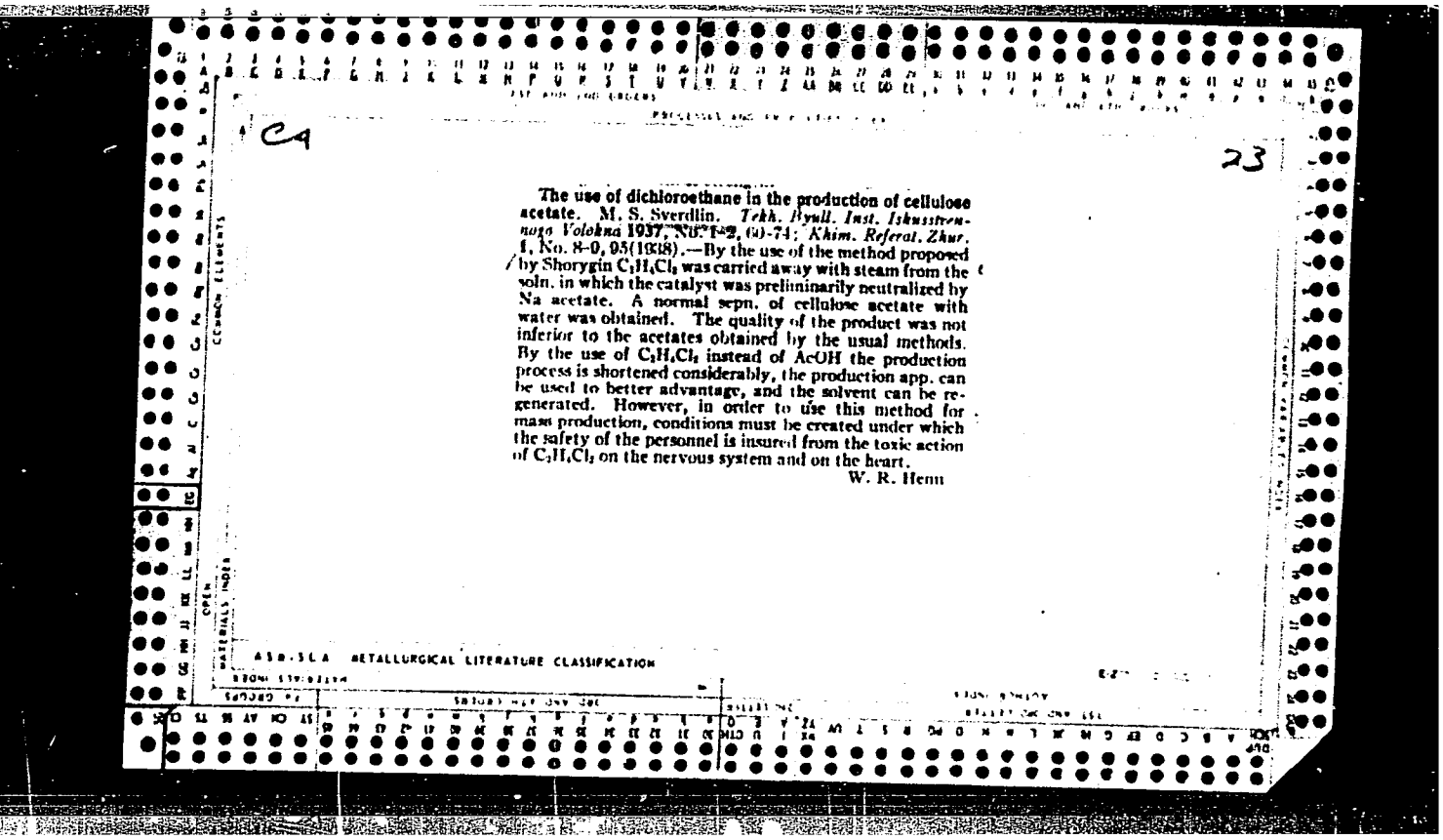
There are 2 figures, 1 table , no references.

SUBMITTED: June 16, 1958



The production of cellulose acetate. M. S. Sverdlin. *Org. Chem. Ind.* (U. S. S. R.) **2**, 515-[illegible]; *Chem. Zentr.* **1937**, I, 4881.—The influence of the properties of the linters (viscosity in cuprammonium soln., ripeness and ash content) on the properties of the cellulose acetate (I) was investigated, especially on the viscosity and transparency of the soln. and the strength, elasticity and tension of the film. Conclusions: (1) The viscosity of the linters (relative viscosity of 1% solns. 30-400, sp. viscosity of 0.25% solns. 0.9-3.7) is, under the same conditions of acetylation, without effect on the viscosity of the I obtained; (2) with linters of the same viscosity, I preps. of various viscosities can be obtained by changing the conditions of acetylation; (3) at the same moisture content of the linters (6.7%) the velocity of acetylation is inversely proportional to the viscosity of the linters; (4) there is no relation between the viscosity of the linters used and the phys.-mech. properties of the I film.

G. G.



C4

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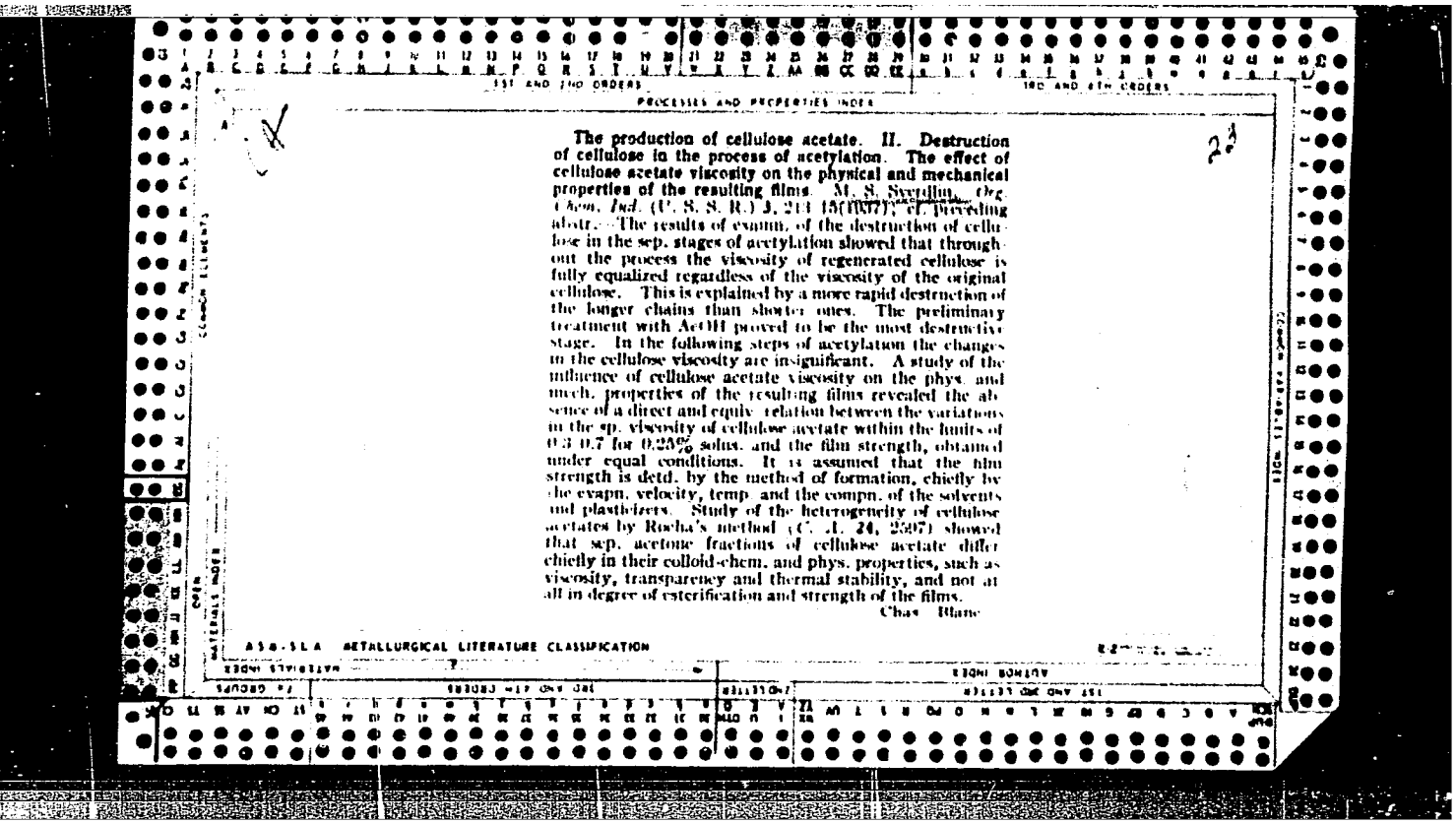
The use of dichloroethane in the production of cellulose acetate. M. S. Sverdlin. *Tekh. Byull. Inst. Iskusstvennogo Volokna* 1937, No. 1-2, 69-74; *Khim. Referat. Zhur.* 1, No. 8-9, 95(1938).—By the use of the method proposed by Shorygin $C_2H_4Cl_2$ was carried away with steam from the soln. in which the catalyst was preliminarily neutralized by Na acetate. A normal sepn. of cellulose acetate with water was obtained. The quality of the product was not inferior to the acetates obtained by the usual methods. By the use of $C_2H_4Cl_2$ instead of AcOH the production process is shortened considerably, the production app. can be used to better advantage, and the solvent can be regenerated. However, in order to use this method for mass production, conditions must be created under which the safety of the personnel is insured from the toxic action of $C_2H_4Cl_2$ on the nervous system and on the heart.

W. R. Henn

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

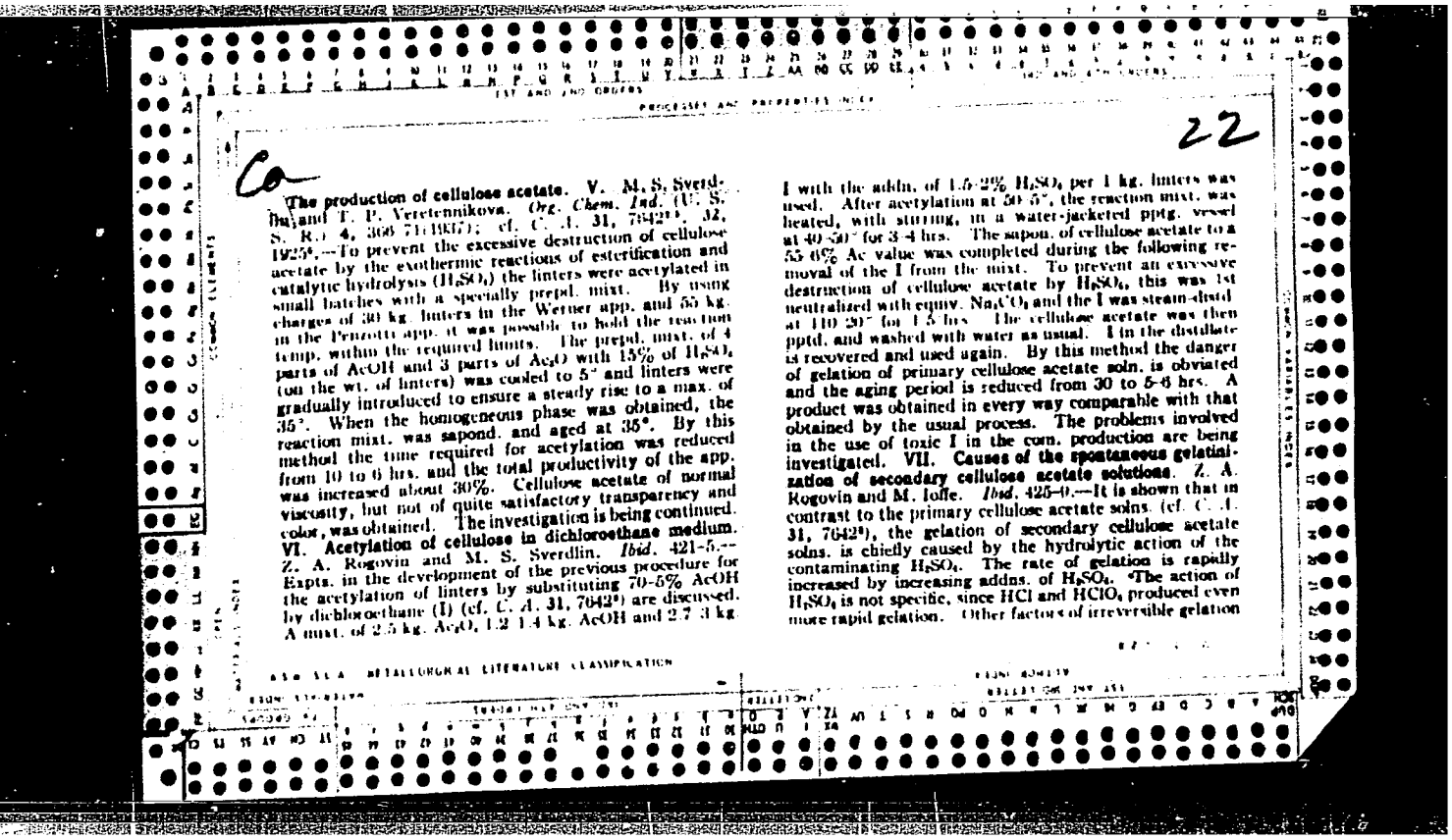


PROCESSES AND PROPERTIES INDEX

The production of cellulose acetate. II. Destruction of cellulose in the process of acetylation. The effect of cellulose acetate viscosity on the physical and mechanical properties of the resulting films. M. S. Syrodin, *Org. Chem. Ind.* (U. S. S. R.) 3, 211-15(1937); cf. preceding abstr.—The results of examn. of the destruction of cellulose in the sep. stages of acetylation showed that throughout the process the viscosity of regenerated cellulose is fully equalized regardless of the viscosity of the original cellulose. This is explained by a more rapid destruction of the longer chains than shorter ones. The preliminary treatment with AcOH proved to be the most destructive stage. In the following steps of acetylation the changes in the cellulose viscosity are insignificant. A study of the influence of cellulose acetate viscosity on the phys. and mech. properties of the resulting films revealed the absence of a direct and equiv. relation between the variations in the sp. viscosity of cellulose acetate within the limits of 0.3-0.7 for 0.25% solns. and the film strength, obtained under equal conditions. It is assumed that the film strength is detd. by the method of formation, chiefly by the evapn. velocity, temp. and the compn. of the solvents and plasticizers. Study of the heterogeneity of cellulose acetates by Rocha's method (*C. A.* **24**, 2507) showed that sep. acetone fractions of cellulose acetate differ chiefly in their colloid-chem. and phys. properties, such as viscosity, transparency and thermal stability, and not at all in degree of esterification and strength of the films.

Chas. Blanc

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION



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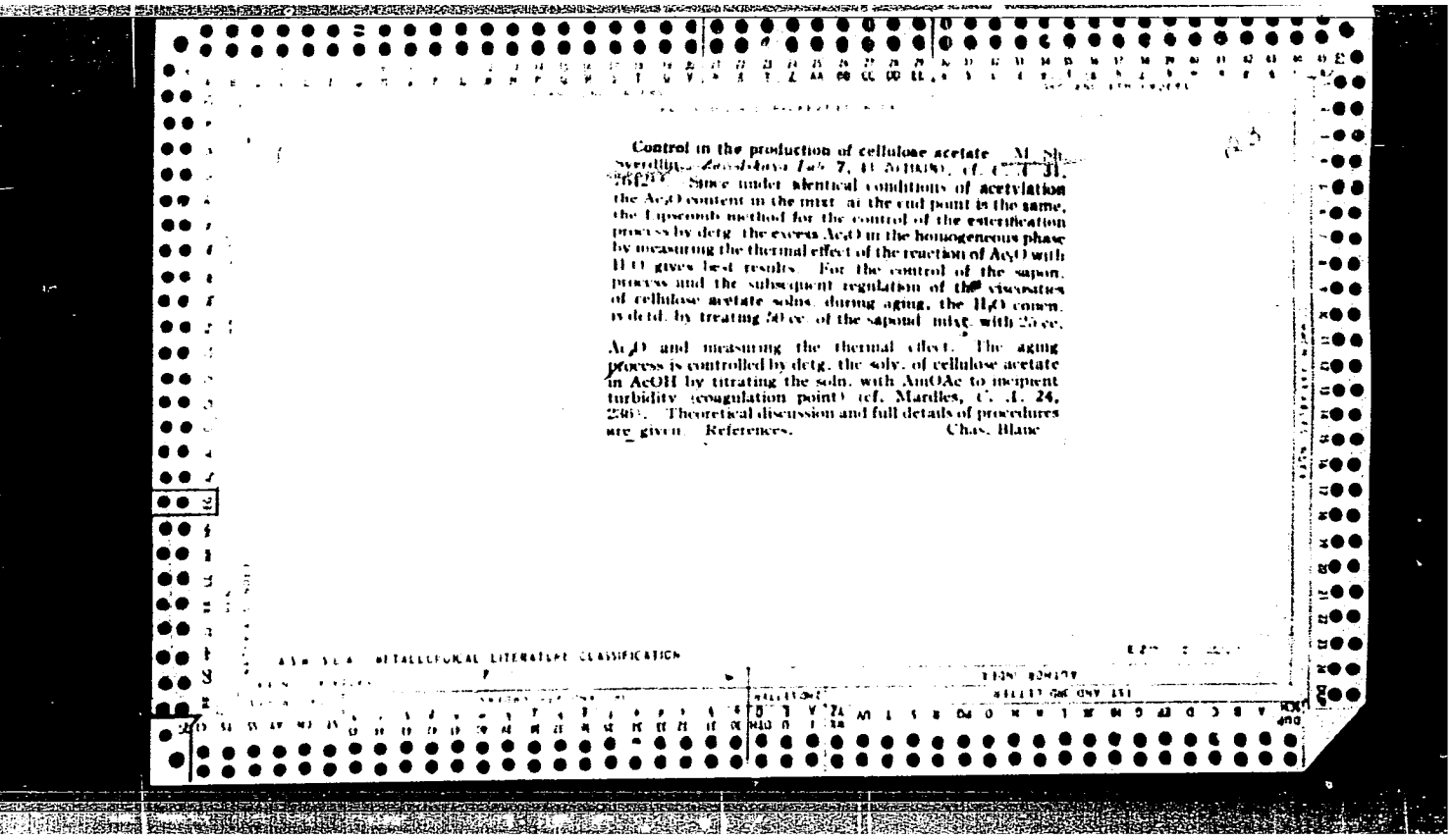
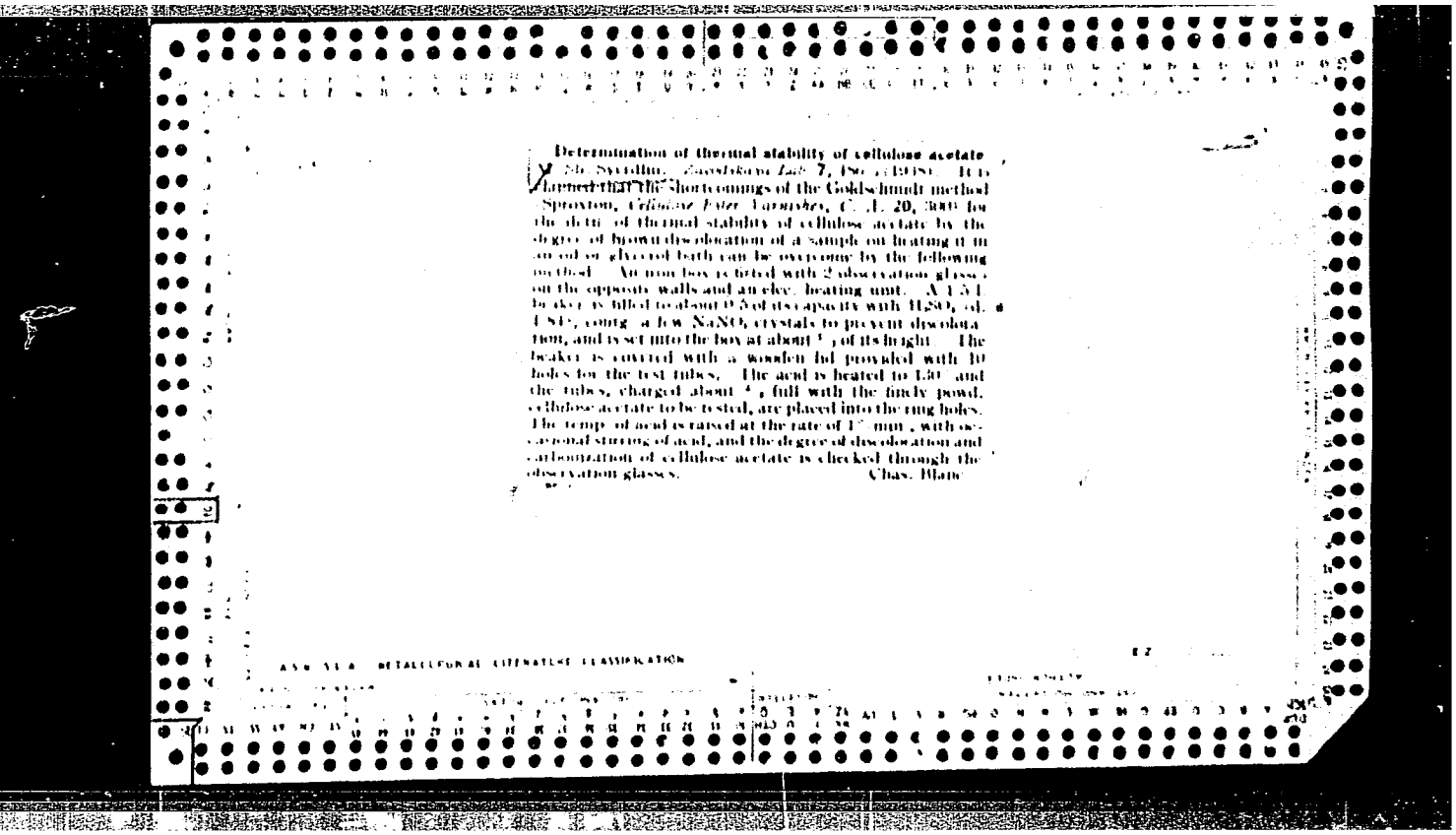
Ca

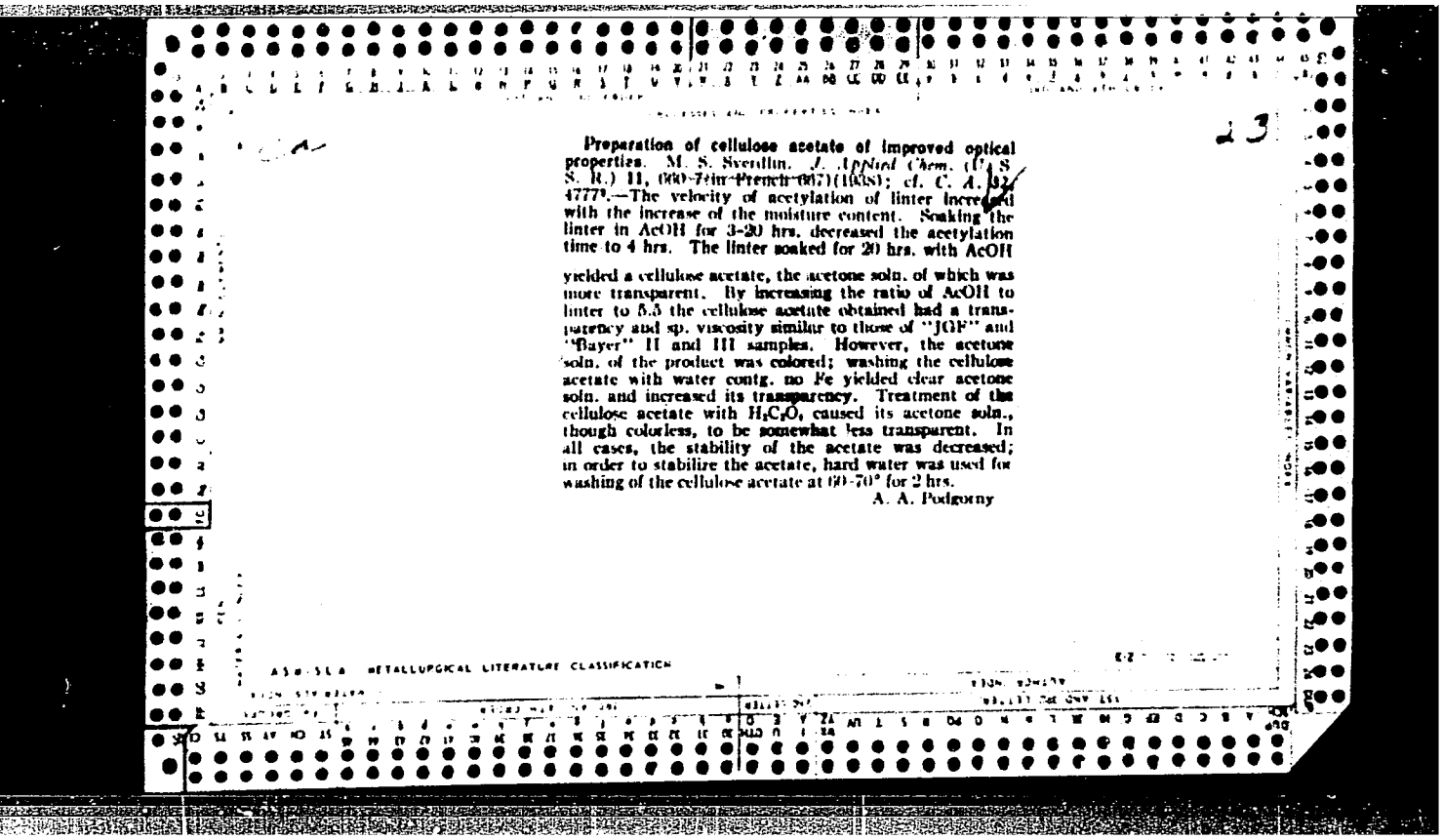
The production of cellulose acetate. V. M. S. Sverdlin and T. P. Veretennikova. *Org. Chem. Ind.* (U. S. S. R.) 4, 366-71(1937); cf. *C. A.* 31, 7642[1], 32, 1925[6].—To prevent the excessive destruction of cellulose acetate by the exothermic reactions of esterification and catalytic hydrolysis (H_2SO_4) the linters were acetylated in small batches with a specially prepd. mixt. By using charges of 30 kg. linters in the Werner app. and 55 kg. charges in the Penzotti app. it was possible to hold the reaction temp. within the required limits. The prepd. mixt. of 4 parts of AcOH and 3 parts of Ac_2O with 15% of H_2SO_4 (on the wt. of linters) was cooled to 5° and linters were gradually introduced to ensure a steady rise to a max. of 35°. When the homogeneous phase was obtained, the reaction mixt. was sapond. and aged at 35°. By this method the time required for acetylation was reduced from 10 to 6 hrs. and the total productivity of the app. was increased about 30%. Cellulose acetate of normal viscosity, but not of quite satisfactory transparency and color, was obtained. The investigation is being continued. **VI. Acetylation of cellulose in dichloroethane medium.** Z. A. Rogovin and M. S. Sverdlin. *Ibid.* 421-5.—Expts. in the development of the previous procedure for the acetylation of linters by substituting 70-5% AcOH by dichloroethane (I) (cf. *C. A.* 31, 7642[9]) are discussed. A mixt. of 2.5 kg. Ac_2O, 1.2-1.4 kg. AcOH and 2.7-3 kg. I with the addn. of 1.5-2% H_2SO_4 per 1 kg. linters was used. After acetylation at 30-5°, the reaction mixt. was heated, with stirring, in a water-jacketed pptg. vessel at 40-50° for 3-4 hrs. The sapon. of cellulose acetate to a 55-6% Ac value was completed during the following removal of the I from the mixt. To prevent an excessive destruction of cellulose acetate by H_2SO_4, this was 1st neutralized with equiv. Na_2CO_3 and the I was steam-distd at 110-20° for 1.5 hrs. The cellulose acetate was then pptd. and washed with water as usual. I in the distillate is recovered and used again. By this method the danger of gelation of primary cellulose acetate soln. is obviated and the aging period is reduced from 30 to 5-6 hrs. A product was obtained in every way comparable with that obtained by the usual process. The problems involved in the use of toxic I in the com. production are being investigated. **VII. Causes of the spontaneous gelatinization of secondary cellulose acetate solutions.** Z. A. Rogovin and M. Ioffe. *Ibid.* 425-9.—It is shown that in contrast to the primary cellulose acetate solns. (cf. *C. A.* 31, 7642[9]), the gelation of secondary cellulose acetate solns. is chiefly caused by the hydrolytic action of the contaminating H_2SO_4. The rate of gelation is rapidly increased by increasing addns. of H_2SO_4. The action of H_2SO_4 is not specific, since HCl and $HClO_4$ produced even more rapid gelation. Other factors of irreversible gelation



Control in the production of cellulose acetate. M. Ni[illegible]. *Zavodskaya Lab.* 7, 41 (1938). Since under identical conditions of acetylation the Ac_2O content in the mixt. at the end point is the same, the Lipscomb method for the control of the esterification process by detg. the excess Ac_2O in the homogeneous phase by measuring the thermal effect of the reaction of Ac_2O with H_2O gives best results. For the control of the sapon. process and the subsequent regulation of the viscosities of cellulose acetate solns. during aging, the H_2O concn. is detd. by treating 50 cc. of the sapond mixt. with 25 cc. Ac_2O and measuring the thermal effect. The aging process is controlled by detg. the solv. of cellulose acetate in AcOH by titrating the soln. with AmOAc to incipient turbidity (coagulation point) (cf. Mardles, C. A. 24, 2261). Theoretical discussion and full details of procedures are given. References. Chas. Blanc

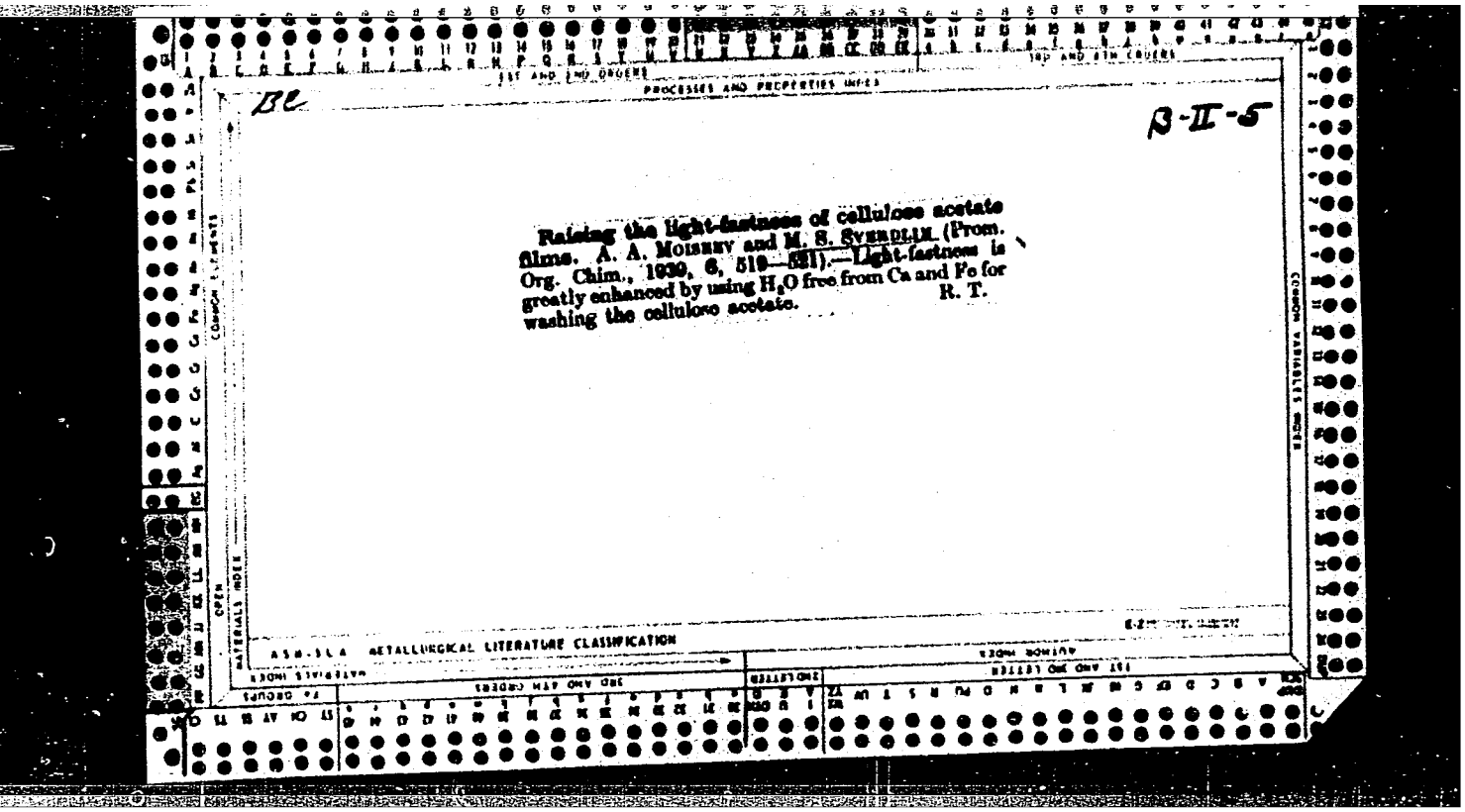


Determination of thermal stability of cellulose acetate. M. Sveshin. *Zavodskaya Lab.* 7, 1[illegible] (1938). It is claimed that the shortcomings of the Goldschmidt method (Spraxton, *Celluloid Zeitschr. Textilchem.*, C. A. 20, 3009) for the detn. of thermal stability of cellulose acetate by the degree of brown discoloration of a sample on heating it in an oil or glycerol bath can be overcome by the following method. An iron box is fitted with 2 observation glasses on the opposite walls and an elec. heating unit. A 1.5-l. beaker is filled to about 0.5 of its capacity with H_2SO_4, sp. g. 1.84, contg. a few $NaNO_3$ crystals to prevent discoloration, and is set into the box at about $\frac{1}{3}$ of its height. The beaker is covered with a wooden lid provided with 10 holes for the test tubes. The acid is heated to 130° and the tubes, charged about $\frac{1}{4}$ full with the finely powd. cellulose acetate to be tested, are placed into the ring holes. The temp. of acid is raised at the rate of 1° per min., with occasional stirring of acid, and the degree of discoloration and carbonization of cellulose acetate is checked through the observation glasses. Chas. Blanc



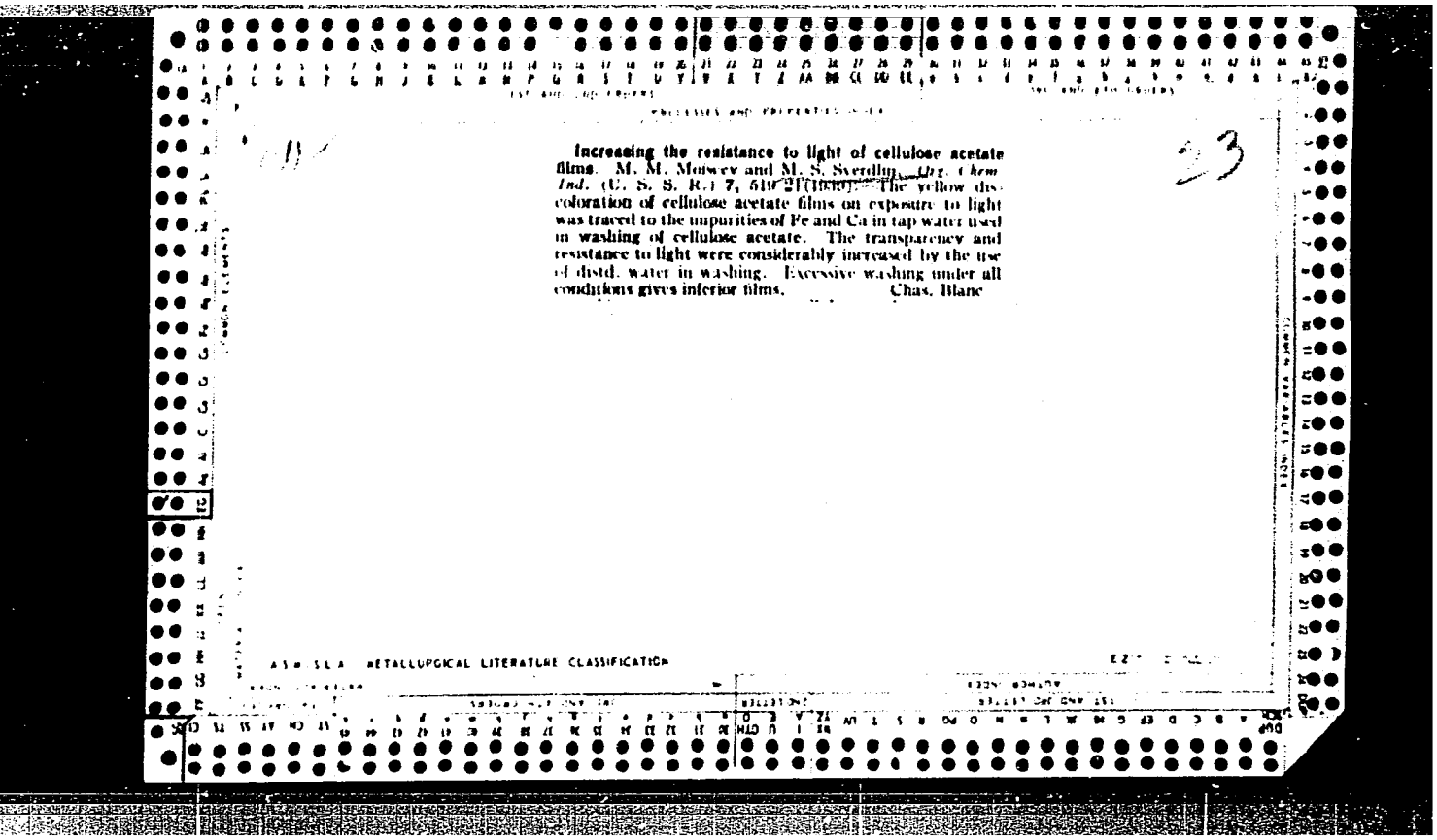
Preparation of cellulose acetate of improved optical properties. M. S. Sverdlin. *J. Applied Chem.* (U.S.S.R.) 11, 999-7(in French 007)(1938); cf. *C. A.* 32, 4777⁹.—The velocity of acetylation of linter increased with the increase of the moisture content. Soaking the linter in AcOH for 3-20 hrs. decreased the acetylation time to 4 hrs. The linter soaked for 20 hrs. with AcOH yielded a cellulose acetate, the acetone soln. of which was more transparent. By increasing the ratio of AcOH to linter to 5.5 the cellulose acetate obtained had a transparency and sp. viscosity similar to those of "JGF" and "Bayer" II and III samples. However, the acetone soln. of the product was colored; washing the cellulose acetate with water contg. no Fe yielded clear acetone soln. and increased its transparency. Treatment of the cellulose acetate with $H_2C_2O_4$ caused its acetone soln., though colorless, to be somewhat less transparent. In all cases, the stability of the acetate was decreased; in order to stabilize the acetate, hard water was used for washing of the cellulose acetate at 60-70° for 2 hrs.

A. A. Podgorny



B-II-5

Raising the light-fastness of cellulose acetate films. A. A. Moiseev and M. S. Syundlin. (Prom. Org. Chim., 1939, 6, 519—521).—Light-fastness is greatly enhanced by using H_2O free from Ca and Fe for washing the cellulose acetate. R. T.



Increasing the resistance to light of cellulose acetate films. M. M. Moiseev and M. S. Sverdlin. *Org. Chem. Ind.* (U. S. S. R.) 7, 510-21(1939). The yellow discoloration of cellulose acetate films on exposure to light was traced to the impurities of Fe and Ca in tap water used in washing of cellulose acetate. The transparency and resistance to light were considerably increased by the use of distd. water in washing. Excessive washing under all conditions gives inferior films. Chas. Blanc

SOV/63-4-3-6/31

5(3)

AUTHORS: Raskin, Ya.L., Candidate of Chemical Sciences, Sverdlin, M.S., Candidate of Technical Sciences

TITLE: Perchloro-Vinyl Resins and Various Copolymers of Vinylchloride as Film-Forming Materials

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 3, pp 327-333 (USSR)

ABSTRACT: In the USSR there are only two resins based on vinylchloride: the perchlorovinyl resin and the copolymer of vinylchloride with vinylidenechloride SVKh-40. Paint coatings with these resins have a high atmospheric resistance and are used in ship and airplane building, etc. It is necessary for the USSR to find substances which are substitutes for the deficient butylacetate. It has been shown [Ref 1, 2] that the molecular weight determines the physico-chemical properties of the final product, not the chemical composition. The resistance and relative lengthening increases with the degree of polymerization. Resins with a viscosity of 1.58 form coatings with high atmospheric resistance. Low-viscous resins dissolve in xylene and in a mixture of xylene with acetone, but the commercial resin produces a gel with these solvents

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Perchloro-Vinyl Resins and Various Copolymers of Vinylchloride as Film-Forming Materials

[Ref 4]. During dissolution a change of the form of the polymeric macromolecule takes place [Ref 5]. Plasticizers are dibutylphthalate, tricresylphosphate, etc. Monomeric plasticizers increase the permeability to moisture in the films [Ref 7]. Stabilizers, like dibutyl--tin-dilaurate, are used as light filters for ultraviolet rays and ac--ceptors for HCl which prevent the decomposition of the polymer. Epoxidized oils are as efficient as metal-organic compounds (Table 4). The adhesion of the resins to the painted surface being low, research is going on to use other monomers and grafted copolymers of vinylchloride as film-forming materials. Copolymers of vinylchloride with vinylbutyl ether and methylacrylate with a molecular weight of 30,000 produce coatings of high elasticity and adhesion and good atmospheric and water resistance [Ref 18]. The copolymer of vinylchloride with vinylidenechloride is highly soluble in varnish solvents [Ref 19]. It is elastic, adhesive and frost-resistant. It protects equipment against concentrated mineral acids and alkali for 3 - 5 months [Ref 20]. A system of primers, intermediate enamels and covering enamels has been developed for the protection of lower parts of ships against corrosion. [Ref 27]. Grafted copolymers formed by the polymerization of a mixture of monomers of butylmethacrylate and methacrylic acid in a latex

Perchloro-Vinyl Resins and Various Copolymers of Vinylchloride as Film-Forming Materials

of polyvinylchloride are resistant to light, atmospheric conditions, gasoline, oil, water, and are not inflammable. The resins are often used as suspensions in liquids which are no solvents for them. For this purpose diisobutylketone is used as a dispersing agent.
There are 30 references, 15 of which are Soviet, 8 English, 4 German, 2 American and 1 Canadian.

Card 3/3

SAPGIR, I.N., doktor tekhn. nauk; IVANOVA, A.A.; GOL'DBERG, M.M.; SAKHARNOV, A.V.; LUBMAN, A.I.; SVERDLIN, M.S.; TYURIN, B.F. Prinimali uchastiye: PLIPLINA, A.I.; IOFFE, M.Ya.; LIVSHITS, M.L., red.; ZAZUL'SKAYA, V.F., tekhn. red.

[Paint materials; raw materials and intermediate products; handbook] Lakokrasochnye materialy; syr'e i poluprodukty; spravochnik. Pod red. I.N.Sapgira. Moskva, Gos.nauchno-tekhn.izd-vo khim. lit-ry, 1961. 506 p. (MIRA 14:12)
(Paint materials)

S/081/62/000/022/080/088
B101/B186

AUTHORS: Raskin, Ya. L., Syerdlin, M. S., Kronman, A. G., Yanovskiy, D. M.

TITLE: Paint and varnish coatings based on the copolymer obtained by the suspension method from vinyl chloride and vinyl acetate

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 552, abstract 22P464 (Lakokrasochn. materialy i ikh primeneniye, no. 2, 1962, 10 - 12)

TEXT: Data are given for the composition and properties of copolymers (CP) synthetized by the suspension method from vinyl chloride and vinyl acetate, and for coatings made on this basis. In addition, recipes are given for primers and enamels based on this CP both in combination with other resins (epoxy, modified alkyd resin) and without them. Test results prove the high resistance to atmospheric effects, the good physico-mechanical properties, the resistance to water and light and the good appearance of coatings based on CP containing 16 - 17 % of vinyl acetate. [Abstracter's note: Complete translation.]

Card 1/1

MIKHAYLOV, V.V.; NAZARKIN, A.T. [deceased]; RASKIN, Ya.L.; SVERDLIN, M.S.; YEFREMOVA, V.K.; Prinimala uchastiye: BEREZINA, G.P.

Granulated organic pigments for the paint industry. Lakokras. mat.i ikh prim. no.3:32-35 '62. (MIRA 15:7)
(Pigments)

SVERDLIN, S.V.

AUTHOR: Sverdlin, S.V., (Tbilisi) 25-58-4-17/41

TITLE: From Tractor Operator to Academician (Ot traktorista do akademika)

PERIODICAL: Nauka i Zhizn ', 1958, Nr 4, pp 43 - 44 (USSR)

ABSTRACT: Academician Vakhtang Vasil'yevich Makhaldiani, a former tractor driver, of the chair of "Tractors and Motorcars" of the Gruzinskiy sel'skokhozyaystvennyy institut (Georgian Institute of Agriculture) is designing a truck engine to be used in mountain areas. This truck must be equipped with devices to improve the operating conditions of the engine, increase brake efficiency and ensure proper temperatures of the liquid coolant and oil while climbing slopes. First tests have been carried out to speed up the manufacture of this new engine by the Kutaisskiy avtozavod (Kutaisi Automobile Plant). There is 1 photograph and 1 sketch.

AVAILABLE: Library of Congress

Card 1/1 1. Cargo vehicles-Design 2. Motors-Design

28(1) SOV/118-59-4-7/25

AUTHORS: Ziskin, B.F. and Sverdlin, V.M., Engineers

TITLE: The Mechanization of Work on Suspension Cable Ways

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1959, Nr 4, pp 25-26 (USSR)

ABSTRACT: In the ore mining industry, suspension cable ways are widely used for the transportation of large tonnage loose materials. Their advantages over other means of transportation are generally known. They would be greater if manual operations were automated or mechanized. While the productivity of the ways has increased considerably since 1949, operating expenses per 1 kilometer-ton have remained almost the same. This is explained by the fact that in recent years the number of personnel engaged in loading, unloading and maintenance work has not only not been reduced, but - on the contrary - increased. This is typical not only for the Tyrny-Auzskiy kombinat (Tyrny-Auz Combine) but also for many other enterprises. Greater

Card 1/2

SOV/68-59-5-5/25

AUTHORS: Sverdlin, V.M., and Men'shikov, I.Ye.

TITLE: From Experience in Operation of the Cableway for Transporting Refuse from the Coking Plant of the Cherepovets Metallurgical Works (Opyt ekspluatatsii otval'noy kanatnoy dorogi koksokhimicheskogo tsekha Cherepovetskogo Metallurgicheskogo Zavoda)

PERIODICAL: Koks i khimiya, 1959, Nr 5, pp 13-15 (USSR)

ABSTRACT: A brief description of the cableway for transporting waste from the coal washery on the above works is given. The improvement in the labour productivity and decrease in the cost of transporting waste achieved on the coking plant due to the replacement of dump cars by the cableway is mentioned.
There is 1 figure.

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ASSOCIATIONS: GPI Proyektavtomatika, and Cherepovetskiy metallurgicheskiy zavod (Cherepovets Metallurgical Works)

S/118/60/000/012/001/009
A161/A033

AUTHOR: Sverdlin, V.M., Engineer

TITLE: Automation of Converters in Nonferrous Metallurgy

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1960,No.12, pp. 1-4

TEXT: The continuous converter process with top blowing is being studied at the Leningradskiy gornyy institut imeni Plekhanova (Leningrad Mining Institute imeni Plekhanov). Meanwhile the "Gintsvetmet" institute in cooperation with "Giprotsvetmet" has developed an automation project for existing converters. The project is partly realized at the Alaverdskiy medno-khimicheskiy kombinat (Alaverdi Copper-Chemical Combine). The article gives detailed a description of automatic devices on copper converters at Alaverdi and on nickel converters at the "Yuzhuralnikkel'" Combine where automation had been carried out by the "Proyektavtomatika" institute. On the copper converters (Fig.1), the air is measured by a diaphragm and a flow meter with recorder, an electric pulse counter shows the blowing time, and a bellows manometer the air pressure variations. When the air pressure

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A161/A033

Automation of Converters in Nonferrous Metallurgy

converter tilts automatically when the blast pressure drops below 0.5 atm (above atmospherical). A secondary МАУС - 2МП- 30В (MAUS-2MP-30V) air volume meter transmits data to the dispatcher point DS through a pneumo-electric converter. A ХА (KhA) thermocouple and a small ПСР (PSR) potentiometer in the hood give an emergency signal at temperature dropping below 400°C (indicating air leak). The metal temperature in the converter is lowered by cold additions and by a РАПИР (RAPIR) radiation pyrometer with ТЭРЭ 50 (TERE50) telescope and a ЭПП-16АМ1 (EPP-16AM1) potentiometer. An experimental dust meter samples flue gas. Dangerous metal bursts-out of converter necks at tilts (due to uneven air distribution) have been eliminated by the use of the pneumatic quick-action МАУС (MAUS) system with pneumatic "K34201" servomotor. The system includes blocking and signalization, and a stand-by circuit for electric motors (Fig.3). The described automation requires no high capital investment and raises the converter work capacity, which is the more important since converters are limiting the output of reverberatory and shaft furnaces at many plants. The following has yet to be done to attain

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S/118/60/000/012/001/009
A161/A033

Automation of Converters in Nonferrous Metallurgy

Fig. 1 : I - converter; II - hood; III - gas collector; IV - regulating gate; V - dust chamber; VI - flue; VII - air takeoff line; VIII - receiver; IX - blast air line; 1 - pulse (pressure) receiving device; 2 - pressure regulator; 3 - magnetic starter; 4 - universal switch; 5 - two-pin push button; 6 - work mechanism; 7 - signal lamp; 8 - electric a.c. drive; 9 - limit switch; 10 - radiation pyrometer; 11 - bimetal heat relay; 12 - closing device; 13 - gate; 14 - thermocouple; 15 - disc diaphragm; 16 - setting selsyn; 17 - light heat relay; 18 - electro-contact manometer; 19 - indicating flow meter with induction pickup; 20 - secondary instrument; 21 - electronic unit; 22 - recording bellows manometer; 23 - pressure drop signal device; 24 - electronic potentiometer; 25 - electric pulse counter; 26 - command-controller; 27 - receiver selsyn; 28 - millivoltmeter. (1) - Signal board in sulfuric-acid shop; (2) - "Converter in blast" signal; (3) - main control board; (4) - relay block; (5) - converter control board; (6) - signal board at reverberatory furnace; (7) - signal board in compressor station; (8) - intake of tail fan in sulfuric acid shop; (9) - gas line to 2nd collector; (10) - cooling water feed; (11) - cooling water takeoff.

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S/118/60/000/012/001/009
A161/A033

Automation of Converters in Nonferrous Metallurgy

Fig. 2: I - skip hopper; II - skip; III - conveyer; IV - hopper; V - ploughshare dropper; VI - hopper with automatic scales; VII - hopper; VIII - conveyer; IX - gas flue; X - dust chamber; XI - dust hood; XII - converter; XIII - air line (blowing); XIV - air line; XV - aspiration fan; XVI - closing gate; XVII - electromagnetic drive. 1 - electronic ЭСУ -1 (ESU-1) level signalizer; 2 - two-pin control push-button; 3 - magnetic starter; 4 - three-pin control push-button; 5 - universal switch; 6 - АП-2 (AP-2) dust meter; 7 - one-pin control push-button; 8 - indicating manometer with pneumatic МГП -270 (MGP-270) pickup; 9 - membrane-type ДМПК-100 (DMPK-100) differential manometer with pneumatic disc transmission; 10 - СПДС -1.5 (SPDS-1.5) pressure drop signaller; 11 - ТХА -VIII (TKhA-VIII) chromel-alumel thermocouple; 12 - ТЭРА -50 (TERA-50) radiation telescope pyrometer; 13 - valve with electromagnetic drive; 14 - gate; 15 - ДП-6 (DP-6) diaphragm; 16 - pneumatic КЗ -4202 (KZ-4202) servomotor; 17 - the loudspeaker communication dynamic; 18 - loud bell; 19 - signal lamp; 20 - siren; 21 - automatic electronic indicating and writing ЭПП-16АМ1 (EPP-16AM1) potentiometer; 22 - БП-28В (BP-28V) lead unit; 23 - БС-34А

Card 7/9

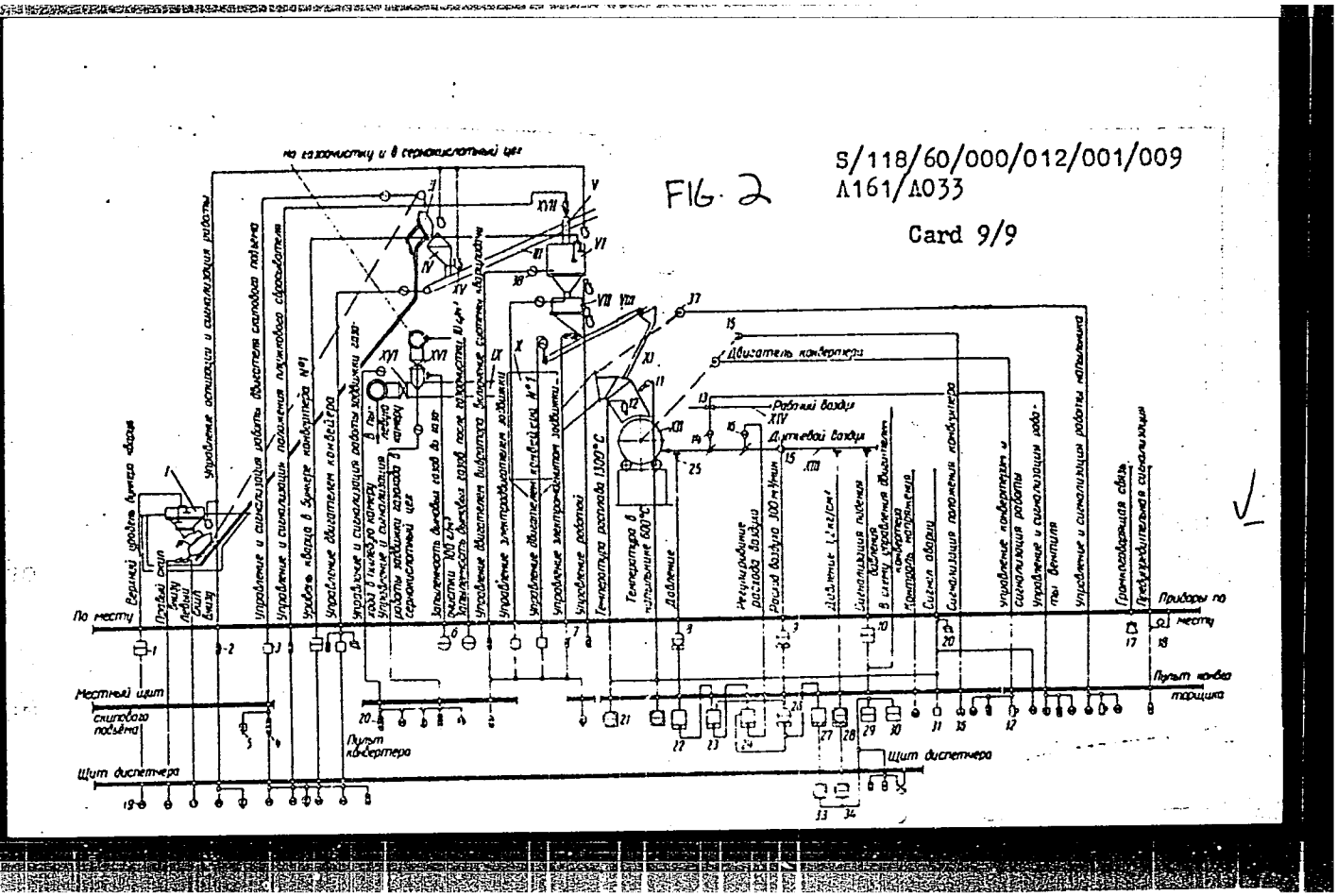

FIG. 2

S/118/60/000/012/001/009
A161/A033

Card 9/9

SVERDLINA, N.; FEDOSEYEVA, N.

For the workers of shops where high temperatures prevail.
Okhr.truda i sots.strakh. 3 no.2:73-74 F '60.
(MIRA 13:6)

(Clothing, Protective)

SVERDLINA, N. T.; LUKINA, Z. K. (Leningrad)

Bronchial asthma in workers employed in offset printing and measures for its prevention. Gig. truda i prof. zab. no.12:44-55 '61. (MIRA 14:12)

1. Sanitarno-epidemiologicheskaya stantsiya Petrogradskogo rayona.

(ASTHMA) (OFFSET PRINTING--HYGIENIC ASPECTS)

SVERDLINA, R. S.

Sverdlina, R. S. - "On the problem of diagnosing various injuries to the liver", Trudy Astrakh. gos. med. in-ta, Vol. IX, 1948, p. 129-33.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

SVERDLINA, R. S. Doc Cand Med Sci -- (diss) " Materials concerning the ~~question~~ problem of ~~some~~ certain biochemical ~~improvements during~~ shifts in cases of malaria."

Astrakhan', 1957, 10 pp 20 cm. (Astrakhan' State Medical Inst),

200 copies

(KL, 21-57, 107)

SVERDLINSKIY, Kh.Yu., inzh.

Pneumatic equipment for supplying machine tools with lubricants. Mash.Bel. no.5:188-189 '58. (MIRA 12:11)
(Metalworking lubricants)
(Machine tools--Attachments)

SVERDLINSKIY, M.Yu.; RYBAKOVA, I.V.

Experimental use of K-17 glue. Der.prom.5 no.4:24 Ap '56.(MLRA 9:7)

1.Shumerlinskiy mebel'nyy kombinat.
(Glue)

BER, A., inzh.; SVERDLOV, A., inzh.

Pioneers' palace. Na stroi. Ros. no.7:20b Jl '61. (MIRA 14:8)
(Moscow--Children's clubs)

SVERDLOV, A.

A quarter of a century at a worthy post. Fel'd. i akush. 26 no.11: 61 N '61. (MIRA 15:2)

1. Zaveduyushchiy Rubtsovskim Otdelom zdravookhraneniya Gorodskogo ispolnitel'nogo komiteta.
(ANNIVERSARIES)

SVERDLOV, A.B.; ZIGMUND, F.F.; NESMEIOV, V.V.

Extracting lanolin from wash water of the Kazan Fur Combine.
Trudy KKHTI no.13:85-89 '48. (MIRA 12:12)

1.Kazanskiy khimiko-tekhnologicheskiy institut im. S.M. Kirova, kafedra obshchey khimicheskoy tekhnologii.
(Kazan--Wool-fat)

SVERDLOV, A.B., (Lieutenant Colonel of the Medical Service), BISPEN, V.I., (Captain of the Medical Service,) and YAGODINSKIY, V.N., (Captain of the Medical Service).

"The E pidemiological Effectiveness of A_2 Influenza Vaccine."

Voyenno-Meditsinskiy Zhurnal, No 12, December 1961, pp 62-73

SVERDLOV, A. B., podpolkovnik meditsinskoy sluzhby; BISPEN, V. I., kapitan meditsinskoy sluzhby; YAGODINSKIY, V. N., kapitan meditsinskoy sluzhby

Epidemiological effectiveness of the A_2 influenza vaccine. Voen.-med. zhur. no.12:62 D '61. (MIRA 15:7)

(INFLUENZA)

KAPLAN A.S.; SVERDLOV, A.B.

Asymptomatic parotitis in vaccinated and nonvaccinated schoolchildren. Zhur. mikrobiol., epid. i immun. 41 no.12:22-25 D '64. (MIRA 18:3)

1. Leninskaya gorodskaya sanitarno-epidemiologicheskaya stantsiya.

NOVIKOV, K.D., master; SVERDLOV, A.G., inzhener.

Packing the joints of air preheater sections. Energetik 1 no.6:15-16 N '53.
(MLRA 6:11)
(Steam boilers)

SVERDLOV, A. G.

729. Vred alkogolizma. Novosibirsk, kn. izd., 1954, 24s. 20sm. 7.000 ekz. 25k.-
[54-54307]p 613.81 + 392

SO: Knizhnaya Letopis, Vol. 1, 1955

USSR/Medicine / Roentgenology FD-697

Card 1/1 : Pub 132 7/22

Author : Pinskiy, Ya. I., Candidate Medical Sciences; Sverdlov, A. G., Candidate Medical Sciences; Titov, G. N. (Novosibirsk)

Title : The reflex component of the influence of X-rays on the inflammation process

Periodical : Vest. Rent. i Rad. 35-41, May/June 1954

Abstract : Early roentgenotherapy of the inflammation process initiated by infection of the dermis with staphylococcus aureus, stops the inflammation in rabbits and brings about its retrogression. Preliminary pricking of the nucleus of the inflammation with a novocaine solution drastically lowers the effectivity of the roentgenotherapy. Apparently the reflex influences arising as a result of the action of the X-rays and directed towards the liquidation of the inflammation changes, plays an important role. Two tables. Four references.

Institution : --

Submitted : --

SVERDLOV, A.G.

Effect of hypophysectomy on functional state of the retinal rods.
Probl. fiziol.opt. 11:123-129 '55. (MLRA 9:6)

1. Kafedra fiziologii Voyenno-meditsinskoy akademii imeni S.M. Kirova.
(PITUITARY GLAND, effect of excision,
on retinal light sensitivity (Rus))
(RETINA, physiology,
eff. of hypophysectomy on retinal light sensitivity (Rus))

SVERDLOV, A.G.(Leningrad)

Distortion of the aortic depressor reflex in shock-type conditions. Arkh. pat. 17 no.4:80-81 O-D '55. (MLRA 9:2)

(WOUNDS AND INJURIES, experimental,
eff. of shock-like conditions to blood pressure reaction to aortic depressor reflex)
(BLOOD PRESSURE, physiology
eff. of traum. shock-like cond. on aortic depressor reflex)
(AORTA, physiology,
eff. of traum. shock-like cond. on aortic depressor reflex)

SVERDLOV, A.G.; KUPRIYANOVA, M.N.

Mechanism of the origin of the "sliding" symptom in acute appendicitis. Khirurgiia 32 no.2:77 F '56. (MLRA 9:7)
(APPENDICITIS)

SVERDLOV, A.G., kandidat meditsinskikh nauk

Problem of unconditioned reflex salivation in chronic gastritis and peptic ulcer. Terap.arkh. 29 no.4:11-15 Ap '57. (MIRA 10:10)

1. Iz Okruzhnogo voyennogo gospitalya (Novosibirsk)
(PEPTIC ULCER, physiology,
unconditioned reflex salivation (Rus))
(GASTRITIS, physiology,
same)
(SALIVATION,
unconditioned reflex, in gastritis & peptic ulcer (Rus))

SVERDLOV, A.G.

Role of humoral factors in the reaction of the organism to ionizing radiation. Med.rad. 4 no.11:19-24 N '59. (MIRA 13:2)
(RADIATION EFFECTS experimental)
(BLOOD CELLS radiation effects)

DZUTSEV, N.K., kapitan meditsinskoy sluzhby; SVERDLOV, A.G., podpolkovnik meditsinskoy sluzhby

Medical factors contributing to night firing. Voen.-med.zhur. no.12:65-66 '59. (MIRA 14:1)
(VITAMINS—A) (SHOOTING, MILITARY)

SVERDLOV, A.G.

Features of the antigen properties of perfusate from irradiated tissues. Med. rad. 5 no.9:88 S '60. (MIRA 13:12)
(RADIATION—PHYSIOLOGICAL EFFECTS)
(ANTIGENS AND ANTIBODIES)

SVERDLOV, A.G.

Effect of perfusate from irradiated tissue on the bactericidal properties of the skin and phagocyte activity of the leukocytes. Med. rad. 5 no.12:73-74 '60. (MIRA 14:3)
(SKIN) (PHAGOCYTOSIS)
(RADIATION--PHYSIOLOGICAL EFFECT)

30355
S/205/61/001/004/014/032
D298/D303

27.1220

AUTHOR: Sverdlov, A. G.

TITLE: The effects on the blood vessels of humoral toxic agents formed during irradiation

PERIODICAL: Radiobiologiya, v. 1, no. 4, 1961, 543-546

TEXT: In previous research (Ref. 15: Med. radiobiologiya, 11, 19, 1959; Ref. 16: Med. radiobiologiya, 9, 88, 1960) with perfusion of irradiated tissues, the author noted the appearance of substances which had a toxic effect on the morphological composition of the peripheral blood; these substances were characterized by thermolability and changed antigenic properties. The same method was used in the present instance to study the effects of humoral agents on the blood vessels. Tests were made of the vasomotor properties of a perfusate of the irradiated isolated ear and irradiated hipbone of rabbits. Perfusion was effected either during irradiation or 1, 2, 3, 4, 5 or 7 days after it. Irradiation was effected with an РУМ-3 (RUM-3) apparatus at an intensity of

4

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above-mentioned substances was specific to irradiation, or whether similar substances appeared in other traumatic states. With this aim, the author investigated the effects of perfusate from scalded rabbit ear tissue on the blood vessels. The tests showed that the vasomotor effect observed in the experiments with radiation has a certain specificity. Ionizing radiation triggers off the formation of substances in the tissues which possess the ability to change the lumen of the blood vessels. There are 1 table and 19 references: 16 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: A. E. Light, Radiology, 25, 734, 1935; T. J. Haley, M. K. Andem, R. F. Riley, K. Williams, Proc. Soc. Exptl. Biol. and Med., 79, 547, 1952.

ASSOCIATION: Okruzhnoy voennyy gospital' No 333 (Okrug Military Hospital No. 333), Novosibirsk

SUBMITTED: February 12, 1961

4

32754
S/205/61/001/006/014/022
D243/D305

27 2240 also 2209

AUTHOR: Sverdlov, A.G.

TITLE: Study of specific changes in tissue antigen properties after exposure to ionizing radiation

PERIODICAL: Radiobiologiya, v. 1, no. 6, 1961, 904 - 905

TEXT: Autoallergy and autoimmunity are of great importance in the pathogenesis of radiation sickness. Previous work in this field, the author states, had been carried out in vitro, using high radiation doses. In the present paper he studies the changes in tissue antigen properties after ionizing radiation and compares the antigen properties of irradiated and burned tissue. Burning was selected because 1) it may cause marked autoimmunity and 2) it is likely to accompany radiation. L.A. Zil'ber's method of active anaphylaxis and desensitization was used. Guinea pigs were sensitized with a subcutaneous injection of perfusate, containing 8 - 10 mg of albumen, from a rabbit, whose ear had been burned with 200 ml of water at 100°C after isolation by the Kravkov-Pisemskiy method and

Card 1/2

SVERDLOV, A.G.

Specific changes in the antigenic properties of tissues caused by ionizing radiation. Radiobiologiia 1 no.6:905-906 '61. (MIRA 15:2)

1. Okruzhnoy voyenno gospital' No.333, Novosibirsk.
(RADIATION--PHYSIOLOGICAL EFFECT)
(ANTIGENS AND ANTIBODIES)

SVERDLOV, A.G. (Novosibirsk)

Characteristics of humoral agents forming under the influence of ionizing radiation. Pat. fiziol. i eksp. terap. 5 no.6:63-64 N-D '61. (MIRA 15:4)

1. Nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. P.D.Gorizontov.
(RADIATION--PHYSIOLOGICAL EFFECT) (BODY FLUIDS)

SVERDLOV, A.G.

Study of the role of the reflex component in the reaction of the body to the action of external ionizing radiations. Arkh. pat. 23 no.3:21-25 '61. (MIRA 14:3)
(RADIATION--PHYSIOLOGICAL EFFECT) (REFLEXES)

KEHKIS, Yu.Ya.; SVERDLOV, A.G.; YASNOVA, L.N.; URZHENKO, A.V.

Possibility of a distance mutagenic action of ionizing radiation in mammals. Radiobiologiia 4 no.6:847-853 '64. (MIRA 18:7)

1. Institut tsitologii i genetiki Sibirskogo otdeleniya AN SSSR, Novosibirsk, i Fiziko-tekhnicheskiy institut AN SSSR, Leningrad.

VARVAK, P.M.; KIRIYENKO, V.I.; CHUDNOVSKIY, V.G.; KRYLOV, V.K.; BRAUDE, Z.I.; EKIMYAN, V.A.; IVANOV-DYATLOV, A.I.; FRANOV, P.I.; ASHKAKOV, A.Ye.; BERDICHEVSKIY, N.M.; IZAKSON, S.I.; KOZLOV, V.I.; KOLESNIK, K.S.; KUYDICH, S.A.; SVERDLOV, A.I.; SIMON, Yu.A.; SHEYNFAYN, S.R.; BOLOTIN, V.V.; GOL'DENBLAT, I.I.

Book reviews and bibliography. Stroi. mekh. i rasch. soor. 3 no.6:46-50 '61. (MIRA 15:4)
(Bibliography—Structures, Theory of)

Solution of cantilevered ...

$I_{\omega.\Pi} = I_{\omega}/\Delta\ell$; t and $\Delta\ell$ - pitch of stringers and ribs respectively.

$$\sigma_c = \sum_n \sigma_{x,n} \cdot \sigma_{\varphi,n}, \qquad (9)$$

where it is assumed that $\sigma_{\varphi.n}$ is known and n = 1,2,3.

$$q^0 = R\delta \int_0^{\varphi} \frac{d\sigma_c}{dx}\, d\varphi = R\delta \cdot \sum_n \frac{d\sigma_{x,n}}{dx}\, \bar{q}^0_{\varphi,n}, \qquad (10)$$

$$\bar{q}^0_{\varphi,n} = \int_0^{\varphi} \sigma_{\varphi,n}\, d\varphi, \qquad (11)$$

$\delta = \delta_{o\delta}\varphi_{o\delta} + \frac{f_{ctp}}{t}$ - assumed thickness of the shell;

$\delta_{o\delta}$ - thickness of the shell; $\varphi_{o\delta}$ - reducing factor;

f_{ctp} - cross-sectional area of the stringer.

$$m^0_{\varphi} = R^3\delta \sum_n \frac{d^2\sigma_{x,n}}{dx^2}\, \bar{m}^0_{\varphi,n}, \qquad (12)$$

$$n^0_{\varphi} = R^2\delta \sum_n \frac{d^2\sigma_{x,n}}{dx^2}\, \bar{n}^0_{\varphi,n}, \qquad (13)$$

$$m^0_x = -EI_{c.n.} \frac{d^2w^0}{dx^2} \qquad (14)$$

$$w^0 = \frac{R^5\delta}{EI_{m.n.}} \sum_n \frac{d^2\sigma_{x,n}}{dx^2}\, \bar{w}^0_{\varphi,n}, \qquad (15)$$

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S/147/62/000/002/010/020
E201/E435

Solution of cantilevered ...

Moskovskiy aviatsionnyy institut (Moscow Aviation Institute)

SUBMITTED: December 8, 1961

Fig.3.

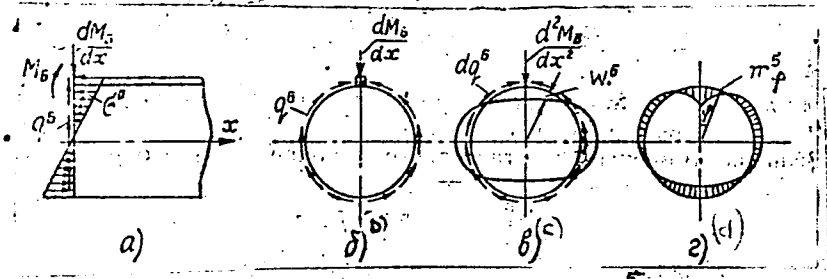


Fig.4.

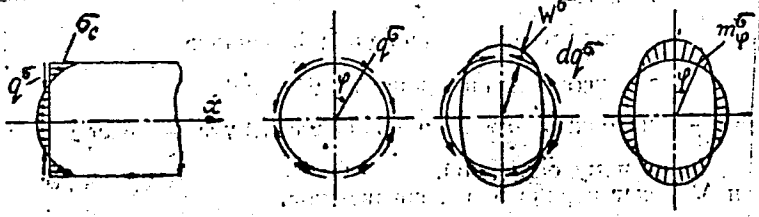
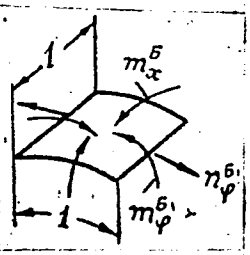


Fig.5.



Card 4/6

40490

S/147/62/000/003/005/007
E031/E435

10.6200

AUTHOR: Sverdlov, A.I.

TITLE: The determination of the reduced cross-sectional area of a cylindrical shell under loading due to tangential forces along the generators

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Aviatsionnaya tekhnika, no.3, 1962, 98-101

TEXT: Due to the tangential forces there arise normal stresses σ on cross sections of the shell. The reduced area of cross section F_{red} is determined from the relation

$$F_{red}\sigma_{max} = \int q dx \qquad (1)$$

The variation of q along the x-axis (parallel to the generators) is given by

$$q = -q^{o}e^{-\beta x}\cos\beta x \qquad (2)$$

where q^{o} is the value of q at $x = 0$ and β is a function of the radius, the reduced thickness of the skin of the shell,

Card 1/2

the cross-sectional moment of inertia and the moment of inertia of a rib. The stressed state of the shell is determined from the sum of the following terms: normal stresses (plane law assumed), corresponding self-balanced tangential forces and bending moments in the circumferential direction, self-balanced normal stresses, corresponding self-balanced tangential forces and bending moments in the circumferential direction. From the expression derived for F_{red} it is seen that as x tends to infinity F_{red} tends to zero, while F_{red} is a maximum for $x = 0$. An approximate expression is derived for this maximum value. There are 2 figures.

SUBMITTED: April 13, 1962

SOKOLOV, V.I., doktor tekhn.nauk, prof.; KAPUSTIN, I.I., doktor tekhn. nauk, prof., retsenzent; SVERDLOV, A.I., kand. tekhn. nauk, red.; KARGANOV, V.G., inzh., red.; EL'KIND, V.D., tekhn. red.

[Fundamentals of the design and construction of parts and units of food machinery] Osnovy rascheta i konstruirovaniia detalei i uzlov pishchevogo oborudovaniia. Moskva, Mashgiz, 1963. 315 p. (MIRA 17:3)

SVERDLOV, A.I., kand. tekhn. nauk

A method for plotting the loading influence function for cantilever plates. Vop. proch. i ustoich. elem. tonkosten. kon. no.1:181-194 '63. (MIRA 17:1)